



U.S. Department of Energy

National Energy Technology Laboratory



October 31, 2001

Program Research and Development Announcement (PRDA) No. DE-RA26-02NT41178 entitled “Advancements for Delivering *In Situ* Treatment for Soil and Groundwater Contamination in Difficult Conditions at DOE Sites”

Prospective Offerors:

The purpose of this Executive Summary Letter is to highlight salient elements of the PRDA. This letter is not an integral part of the PRDA which is a self-contained document. In the event of any conflict between the contents of this Executive Summary Letter and that of the PRDA, the PRDA language will prevail.

The National Energy Technology Laboratory (NETL) Industry Program is coordinating with the Subsurface Contaminant Focus Area (SCFA) and the Oak Ridge, Tennessee and Hanford, Washington Sites to address technology needs identified by the DOE Nuclear Weapons Complex sites for innovative, improved technologies that can deliver *in situ* treatment to hazardous and radiological contaminants in soil and groundwater located in difficult subsurface and surface conditions at DOE sites. For example, at the Oak Ridge Y-12 Plant, historic releases of carbon tetrachloride occurred that resulted in a groundwater plume that extends to depths greater than 400 ft in complex geology including steeply dipping, highly fractured limestone. These conditions hamper the delivery of planned bioremediation treatment. Similarly, the groundwater in several areas of the DOE Hanford Site is contaminated with chromium from nuclear reactors previously used for plutonium production. The aquifer containing the contamination presents challenges to subsurface access and delivery of *in situ* treatment to chromium plumes, because it consists of loosely consolidated heterogeneous sedimentary materials ranging from silt to cobbles and boulders. Additionally, some contaminated sites lie adjacent to the Columbia River. Proposed technologies are sought that can provide innovative and improved delivery of *in situ* treatment to contaminants in difficult conditions such as these cited. Two research topic areas have been defined to address a wide variety of difficult conditions and hazardous contaminants in soil and groundwater, and include: 1) Topic Area 1--Effective Delivery of Bioremediation for Volatile Organic Compound (VOC) Contamination; and 2) Topic Area 2--Effective Delivery of Treatment for Metals and Radionuclides in the Vadose Zone and Groundwater With Minimal Surface Impact in Environmentally Sensitive Areas. Studies should consist of advanced design, fabrication, and control/field-scale testing of the selected technology systems, then full scale field demonstration. Innovative, breakthrough technologies are desired. Selected technologies must demonstrate clear benefits to DOE (superior technical performance, reductions in cost, schedules, and risks to workers, the public, and the environment) and be acceptable to end-users within the DOE Complex.

Potential technology end-users include DOE personnel at DOE Complex sites, DOE M&O and M&I contractors at DOE Complex sites, and National Laboratory personnel at DOE Complex sites; offerors may be required to interact and coordinate with any of these entities to facilitate field testing at a DOE Complex site.

The formal solicitation document will be disseminated and proposals received electronically through the Industry Interactive Procurement System (IIPS) located at the following URL: <http://e-center.doe.gov/>. IIPS provides the medium for disseminating solicitations, receiving proposals, and evaluating proposals in a paperless environment. Completed proposals are required to be submitted via IIPS. Individuals who have the authority to enter their company into a legally binding contract and intend to submit proposals via the IIPS system must register and receive confirmation that they registered prior to being able to submit an application on the IIPS System. An IIPS “User Guide for Contractors” can be obtained by going to the IIPS Homepage at <http://e-center.doe.gov> and then clicking on the “Help” button. Questions regarding the operation of IIPS may be e-mailed to the IIPS Help Desk at [IIPS\\_HelpDesk@e-center.doe.gov](mailto:IIPS_HelpDesk@e-center.doe.gov) or call the Help Desk at (800) 683-0751.

Each offer will be objectively reviewed on its own merit against the evaluation criteria stated in the PRDA using technical, scientific and/or peer reviewers, some of whom may be non-Governmental personnel. Should an offeror object to review of their proposals by individuals other than Government employees it shall so state in Volume I of its proposal. Offerors are, however, cautioned that the DOE may be unable to give full consideration to proposals which indicate that only Government evaluation is authorized.

Individuals, corporations, nonprofit organizations, small and small disadvantaged businesses, educational institutions, and state or local governments or other entities who wish to have a proposal evaluated should respond to the requirements of this PRDA.

Proposals submitted by, or substantially relying upon the technical expertise of, (1) another Federal agency; (2) a Federally Funded Research and Development Center (FFRDC) sponsored by a Federal agency; or (3) a Department of Energy (DOE) Management and Operating (M&O) contractor are not desired, will not be evaluated, and will not be eligible for an award under this solicitation. Offerors are encouraged to maximize the use of private sector organizations in the performance of the proposed effort. However, a proposal that includes performance by a FFRDC or DOE M&O contractor(s) may be considered for award, provided that: (1) the proposed use of any such entities is specifically authorized by the cognizant agency for the FFRDC or DOE for DOE M&O contractors, in accordance with the procedures established for the FFRDC or the DOE M&O contractor; (2) the work is not otherwise available from the private sector; and (3) the estimated aggregate cost of the FFRDC or M&O contractor(s) work does not exceed 25 percent of the total estimated project cost. DOE reserves the right to fund the work through a DOE field work proposal or an interagency agreement. If so, DOE will not reimburse the prime contractor or higher-tiered subcontractor, for indirect costs (e.g. overhead and/or G&A) allocated to the FFRDC or M&O subcontract costs.

The DOE anticipates multiple cost-reimbursement-fixed-fee awards, but the DOE reserves the right to award the contract type and number deemed in its best interest. The projects shall be conducted in two phases. In the first phase, advanced design, fabrication, and control/field-scale testing shall be completed. Upon completion of evaluation of Phase 1 results, the government will make unilateral decisions regarding exercise of the optional Phase 2. In the second phase, full scale field demonstration of the technology system shall be conducted at a site selected by DOE and the Contractor. Technology performance and cost benefits shall be evaluated for both the Phase 1 and Phase 2 studies. The Government requirements are detailed in the PRDA Statement of Work Format contained in Section J, Attachment A.

It is anticipated that the Base contract - Phase 1, will be completed within an estimated 10 months after award and the final report will be completed within 12 months from date of award. The estimated cost range for the Base contract - Phase 1 under this solicitation is between \$300,000 to \$600,000. Upon completion of the Base contract - Phase 1, decisions for determining whether or not to exercise the optional Phase 2 will be determined based on Phase 1 results and performance, availability of funding, and continued need for the technology. It is expected that Phase 2 full scale demonstration (s) will be completed within an estimated 10 months after award of Phase 2. However, this does not preclude consideration of longer or shorter projects at higher or lower costs. **The offeror must provide a Statement of Work and Cost Proposal for both Phase 1 and Phase 2.**

The Government does not anticipate providing any facilities or property for accomplishing this effort. Offerors are encouraged to propose utilization of existing facilities and to make allowances for providing all necessary personnel, facilities, equipment and materials to complete proposed projects.

Proposals must be submitted in accordance with the requirements of the PRDA (See Section L). Offerors are also advised to give particular attention to the evaluation criteria identified in Part V, Section M. Proposals **must** be received electronically via the IIPS System. **ALL PROPOSALS MUST HAVE AN IIPS TRANSMISSION TIME STAMP OF NOT LATER THAN 8:00pm EASTERN STANDARD TIME ON DECEMBER 17, 2001.**

Proposals must authorize a period for acceptance by the Government of not less than one hundred eighty (180) calendar days from the date specified for receipt of proposals. Further, you are cautioned that late proposals, modifications, and withdrawals will be treated in accordance with the article in Section L entitled "Instructions to Offerors - Competitive Acquisition."

Please complete and return the enclosed Intention to Propose form at the earliest practicable date. The Intention to Propose form is contained in the solicitation. All files are formatted for printing on a postscript type printer.

All requests for explanation or interpretation of any part of the PRDA shall be submitted in writing to the Contract Specialist. Your written questions must be received by the Contract Specialist **by November 13, 2001** to allow sufficient time to post the responses on the IIPS Homepage prior to the due date for proposals. The Government reserves the right not to respond to questions submitted after this date, nor to respond to questions submitted by telephone or in person at any time. If the Government elects to answer the questions, the questions will be answered via an amendment to the solicitation, with copies of both questions and answers included in the amendment, without reference to the originating sources. All amendments will be posted on the IIPS Homepage at

**"<http://e-center.doe.gov/>"**

therefore, offerors are encouraged to periodically check the IIPS Homepage to ascertain the status of any amendments as hard copies will not be distributed.

For your information, it is recommended that all prospective offerors download a copy of the DOE "Lobbying Brochure" (**<http://www.professionals.pr.doe.gov/ma5/MA-5Web.nsf/Procurement/Lobbying+Brochure?OpenDocument>**) which provides a summary of the statutory and regulatory restrictions regarding lobbying activities for Federal contractors and recipients.

Please note that an automated document writing system has been used to prepare this document. Each provision in the data base has been assigned a number. Not all of the provisions in the data base have been used in this document; therefore, the numbering may not be continuous. Provisions with "[ ]" will be completed after negotiations.

All communications concerning this PRDA should cite the PRDA number and be directed in writing to the attention of the Contract Specialist via mail at the aforementioned address, via fax at (304)285-4683, or via E-mail at [driggi@NETL.doe.gov](mailto:driggi@NETL.doe.gov).

Sincerely,

Original Signed by D. Denise Riggi

D. Denise Riggi  
Contract Specialist  
Acquisition and Assistance Division

2 Enclosures

- 1) Project Background Information
- 2) Program Research and Development Announcement (PRDA)

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## ENCLOSURE 1

### General Background and Description of Representative DOE Sites

#### General Background

After years of designing, manufacturing, and testing nuclear weapons, the DOE is faced with the challenge of cleaning up the hazardous waste left behind. More than 5,700 known DOE groundwater plumes have contaminated more than 475 billion gallons of water. DOE landfills contain more than 3 million cubic meters of buried waste contaminating the surrounding environment. At DOE sites throughout the country, soil, groundwater, and landfills containing or contaminated with hazardous and radioactive contaminants have special cleanup needs.

This study is focused on needs identified by the DOE Nuclear Weapons Complex sites for technologies that provide innovative, improved delivery of *in situ* treatment for soil and groundwater contamination at DOE Nuclear Complex Sites. The improved delivery methods will also be required to operate efficiently and cost-effectively in conditions deemed as difficult and challenging. Numerous subsurface and surface conditions have presented technical challenges to effectively access, deliver, and distribute *in situ* treatment to a wide class of hazardous and radiological contaminants with technology systems that are acceptable to end-users, regulators, and stakeholders. For example, deep contamination (in excess of 300 feet), lithologies difficult to penetrate or distribute treatment agents within such as conglomeratic sediments and fractured limestone, proximity to natural geomorphic features such as fluvial environments, and manmade structures that provide interferences such as buildings and underground tanks can, singly or combined, produce conditions that hamper design and implementation of *in situ* remediation. Two research topic areas have been identified to address high priority needs for delivery of *in situ* treatment of soil and groundwater contamination at DOE sites, and are further defined with respect to different classes of hazardous and radioactive contaminants requiring treatment, varying surface and subsurface conditions identified as difficult and challenging, and anticipated performance requirements as identified by DOE site end-users. These include: 1) Topic Area 1--Effective Delivery of Bioremediation for Volatile Organic Compound (VOC) Contamination; and 2) Topic Area 2--Effective Delivery of Treatment for Metals and Radionuclides in the Vadose Zone and Groundwater With Minimal Surface Impact in Environmentally Sensitive Areas.

Selected technologies must demonstrate clear benefits to DOE (superior technical performance, reductions in cost, schedules, and risks to workers, the public, and the environment) and be acceptable to end-users within the DOE Complex. Novel and breakthrough field technologies are desired. The technology will be selected on the basis of a matrix of integrated functions, issues, and performance requirements. They include: (1) focus of DOE Complex enduser needs (DOE site enduser's likely commitment to technology based on performance, fulfilling site needs, and others; novel and innovative nature of technology (not redundant of existing technologies)); and prevalence of the need for the technology within the DOE Complex; (2) technical and engineering issues (technical viability; engineering feasibility; advanced level of technology maturity; technical performance over baseline; effect of use of technology, e.g. secondary waste reduction); (3) benefits of the technology (risk reduction compared to baseline; cost reduction compared to baseline; return of investment; and leveraging of funds and resources); and (4) acceptance and compliance issues (stakeholder acceptance, and regulator acceptance and ability for technology to meet regulatory compliance).

The technology will be required to operate under broad field conditions encountered at DOE sites such as the Oak Ridge Site, the Hanford Site, and other similar sites that have subsurface and surface conditions deemed difficult and challenging for delivery of *in situ* treatment. More information is provided in the following of field conditions and technology requirements for the representative sites of Oak Ridge and Hanford.

#### Description of Representative DOE Sites

As stated previously, numerous DOE sites such as Oak Ridge and Hanford have soil and groundwater contaminated with volatile organic compound, metal, and radionuclide contamination. Related to Topic 1, an extensive and deep carbon tetrachloride groundwater plume is present at Oak Ridge's Upper East Fork Poplar Creek Characterization Area that contains

the Y-12 Plant industrial areas. The dissolved carbon tetrachloride plume that extends to a depth of approximately 400 feet, is considered to originate from a free-product dense non-aqueous phase liquid (DNAPL) contained in the fractured bedrock underlying an area of the Y-12 Plant. Pump and treatment operations have been implemented, but bioremediation augmentation of these operations is planned; effective delivery of biostimulants to the targeted source and high concentration area contamination present in fractured bedrock to depths up to 400 feet is needed and represents the technical challenge at Y-12. Similarly, related to Topic 2, the groundwater in several areas of the DOE Hanford Site is contaminated with chromium from nuclear reactors previously used for plutonium production. The aquifer containing the contamination presents challenges to subsurface access, because it consists of loosely consolidated heterogeneous sedimentary materials ranging from silt to cobbles and boulders. A permeable reactive barrier using strongly reductive chemicals is currently being installed in one of the chromium plumes using access through conventionally drilled vertical boreholes; this barrier effectively removes chromium from the groundwater, preventing it from entering the Columbia River. Innovative, improved technologies are sought for access to the subsurface to cost-effectively emplace the liquid reductant. This work should also be accomplished with a minimum of investigation-derived waste and minimum impact to aquifer permeability.

Innovative, improved technologies are sought for delivery of *in situ* treatment of soil and groundwater contaminants in difficult subsurface conditions at DOE Nuclear Complex sites such as these conditions cited. The following Oak Ridge Site and Hanford Site information contains more details regarding the location and nature of contamination, subsurface and surface conditions, and treatment/remedial agents that will be required to be delivered to contaminated soil and groundwater. Relevant figures are included following the text.

#### Oak Ridge Site (Topic Area 1 -- Effective Delivery of Bioremediation for Volatile Organic Compound (VOC) Contamination)

The DOE Oak Ridge site has needs for improved delivery methods of *in situ* treatment. One specific need is for effective delivery of biotreatment for volatile organic compound plumes located in challenging subsurface conditions that include deep contamination (greater than 300 feet) and complex geology (for example, steeply dipping, fractured bedrock). The following describes an example of Oak Ridge's needs for delivering *in situ* treatment, site conditions that present challenges, and specific performance requirements. It is anticipated that awards made under this PRDA for Topic Area 1 (Effective Delivery of Bioremediation for Volatile Organic Compound (VOC) Contamination), will be required to identify and arrange a demonstration site that is offsite to the DOE Oak Ridge properties. However, the selected technologies will be required to meet Oak Ridge performance requirements for operation, and future deployments of successful technologies are anticipated on the Oak Ridge Site.

The Upper East Fork Poplar Creek Characterization Area (UEFPC CA) contains the developed Y-12 Plant industrial areas, including waste processing, storage, disposal areas, and groundwater that extends off-site into Union Valley (Figure 1). The groundwater in the Upper East Fork Poplar Creek (UEFPC) watershed, which is part of the Y-12 Plant installation, contains carbon tetrachloride (CT) in quantities greater than permitted by Environmental Protection Agency (EPA) regulations for drinking water sources (Figure 1). The dissolved CT plume is considered to originate from a free-product dense non-aqueous phase liquid (DNAPLs) contained in the fractured bedrock underlying an area of the Y-12 Plant.

DNAPLs at the UEFPC CA, including CT, perchloroethylene (PCE), and trichloroethylene (TCE), are slightly soluble in water and can partition into gaseous, solid (i.e., sorbed), and aqueous (dissolved) phases. In addition, these compounds, in either immiscible or dissolved-phase form, may sorb onto soil and/or rock surfaces or diffuse into the bedrock matrix.

Although no direct evidence of free-phase DNAPLs exist at the site (i.e., no free-phase product has been observed in groundwater monitoring wells), volatile organic compounds (VOCs) have been detected at concentrations (in excess of 1 percent of solubility limits) that are indicative of several free-phase DNAPLs source areas within the UEFPC CA. In general, free-phase DNAPLs are difficult to detect, and where present, are likely to significantly limit the effectiveness of groundwater remediation programs. The DNAPLs problem at the UEFPC CA is compounded by the impracticability of completely characterizing the nature and extent of groundwater contamination. Characterization is especially difficult in karst and fractured rock settings where subsurface heterogeneities and fracture patterns cannot be completely delineated. Additional challenges to site characterization result from the high density of active facilities in the vicinity of the groundwater contamination that interfere with characterization activities.

Bedrock beneath the UEFPC CA can be divided into carbonate-dominant and siliciclastic-dominant lithologies. Hydrogeology differs significantly between these rock types. The primary permeability of the rocks underlying the UEFPC CA is very low; however, diagenesis, fracturing, and solution weathering of the bedrock have resulted in secondary porosity and increased permeability through which most groundwater movement occurs. Groundwater movement in the carbonate-dominant formations has components of both fracture flow and flow through solution-enlarged cavities and conduits.

Hydraulic conductivities calculated from the adjoining Bear Creek Valley Characterization Area span five orders-of-magnitude ( $10^{-3}$  to  $10^{-8}$  cm/s). The direction of the groundwater flow is controlled by the hydraulic gradient and the permeability of the medium. The overall pattern in the siliciclastic bedrock is preferential flow along strike; collection of shallow groundwater at buried tributaries and storm drains, with eventual discharge, via outfalls, to UEFPC and the Maynardville Limestone. Once in the Maynardville Limestone, groundwater generally moves to the east.

Addressing the remediation of chlorinated solvents, specifically carbon tetrachloride in contaminated groundwater in fractured rock at depths of up to 500 feet deep, represents the technical challenge at UEFPC. Few remedial technologies have been proven for the remediation of dissolved-phase DNAPLs in granular aquifers on a field scale. Even fewer technologies are available for remediating free-phase DNAPLs in karst and fractured rock settings, such as that found at the UEFPC CA. Many of the technologies that seem to be effective in field-scale demonstrations depend on lowering interfacial tension to mobilize residual DNAPLs. This has the potential to mobilize free-phase DNAPLs either deeper into the subsurface or laterally and is therefore a risky method of remediation.

Several innovative remedial technologies were evaluated. It was concluded that bioremediation, specifically bioaugmentation or biostimulation, is a promising remedial technology. Laboratory-scale treatability studies were performed to determine the potential for complete contaminant degradation using native and introduced microorganisms. The results of these studies indicated that complete degradation of CT to harmless end products was possible with the addition of nutrients and electron donors. Biostimulation was chosen over bioaugmentation.

The primary driver for a deep access and delivery technology is that a system to inject nutrients or other remediation fluids and monitor their delivery and distribution effectiveness, does not exist. At 400 feet below the ground surface, the accuracy of delivery of remediation fluids is difficult to evaluate. Delivery of these fluids to a DNAPL source would greatly shorten the estimated time that a pump and treat system would have to operate.

Within the last few years, numerous bioremedial field operations have been tested at various locations in the United States. Specific examples of amendment delivery systems used in several of these bioremedial field operations include: the anaerobic accelerated bioremediation of TCE at Dover Air Force Base; the anaerobic biostimulation of TCE bioremediation at Test Area North (TAN), Idaho National Engineering Laboratory; and the bioaugmentation for remediation of carbon tetrachloride at Schoolcraft, Michigan. These approaches, procedures, and delivery systems serve as examples for conceptualizing or the development of a potential delivery system for the Oak Ridge site. It may be appropriate to address the desirability of adding electron donors, electron acceptors, and/or nutrient or bioaugmentation. Such assessments may be examined by preliminary tests using microcosms, mesocosms, or laboratory scale columns using appropriate subsurface media. Any volumes needed for said additions, the timing, and format of said injections should be addressed. Furthermore, extensive monitoring of subsurface conditions, toxicants, and byproduct concentrations, as well as the impacts of bioremedial activities and related procedures should be addressed. An amendment delivery system must also achieve adequate mixing of the amendments with contaminated groundwater in the biologically active zone in order for biodegradation to take place. Finally, the amendment delivery system must be cost-effective, easy to operate, and easily monitored.

The goal of this project is to design, develop, and demonstrate improved methods of accessing this difficult geologic environment and delivering agents to aid in remediation of contaminants. Qualifying technologies can be a combination of technologies integrated together, and should be capable of meeting the identified field performance requirements. Expedient field demonstrations at a site with conditions comparable to Oak Ridge conditions are desired for qualifying technologies, and a full scale demonstration is anticipated. To that end, the following are anticipated performance requirements that would be required for a full-scale demonstration.

- Operational for depths ranging from the surface to 400 feet

- ▶ Effective delivery of bioremedial fluids to aquifer in complex geology including fractured bedrock, steeply dipping beds, and heterogeneous, interbedded strata
- ▶ Achieve adequate mixing of the bioremedial fluids with contaminated groundwater in the biologically active zone in order for biodegradation to take place
- ▶ Ability to be monitored for effectiveness in delivery and distribution of biomedial fluids to targeted zones
- ▶ The technique should be minimally invasive and produce a minimum amount of Investigative Derived Waste (IDW)
- ▶ Ability to minimize operational time including rapid site mobilization, completion of operations, and demobilization. The technology should operate reliably, with minimal scheduled or unscheduled outages for maintenance or repair
- ▶ Demonstrated cost savings compared to baseline drilling and injection methods, and able to operate within the Environmental, Safety, and Health requirements and regulatory and stakeholders requirements at the demonstration site

Hanford Site (Topic Area 2 -- Effective Delivery of Treatment for Metals and Radionuclides in the Vadose Zone and Groundwater With Minimal Surface Impact in Environmentally Sensitive Areas)

The DOE Hanford site has needs for improved delivery methods of *in situ* treatment, and is a candidate demonstration site for awards made under this PRDA under Topic Area 2 (Effective Delivery of Treatment for Metals and Radionuclides in the Vadose Zone and Groundwater With Minimal Surface Impact in Environmentally Sensitive Areas). The following describes an example of Hanford's needs for delivering *in situ* treatment, site conditions that present challenges, and specific performance requirements.

At the Hanford 100-D Area (Figure 2), hexavalent chromium was discharged to the water table during the period of reactor operation (1944-1967). There are currently at least three chromium groundwater plumes in this area, with concentrations over 2,000 micrograms per liter ( $\mu\text{g/L}$ ). The groundwater in this area is approximately 25 meters below the ground surface. The thickness of the unconfined aquifer is approximately 5 meters (m) (15 feet (ft)) during normal stage of the Columbia River. However, during high river stage (e.g., flooding), the aquifer thickness increases to 6 m (20 ft). Groundwater enters the Columbia River through upwelling in the river bottom and through shoreline seeps.

Chromium-contaminated groundwater entering the river poses a risk to aquatic organisms in the COLUMBIA River. The relevant standard for protection of freshwater aquatic life as specified in the ROD is 11  $\mu\text{g/L}$  chromium (the standard in *Washington Administrative Code* [WAC]173-201A at the time of ROD signature). Chromium concentrations in groundwater west of the 100-D/DR Reactors exceed 2,000  $\mu\text{g/L}$ .

The 100-D Area is immediately underlain by the Hanford Formation and Ringold Formation. The Hanford Formation consists of gravel, sand, and silt deposited by cataclysmic flood waters that drained out of glacial Lake Missoula during the Pleistocene epoch. The Hanford Formation in this area consists of gravel- and sand-dominated facies. Thickness ranges from 1.5 to 24.4 m (4.9 to 80 ft). The gravel-dominated facies consists of clast-supported unconsolidated sandy gravels and silty sandy gravels. Occasional sand lenses and silt stringers are intercalated with the gravel. The sand-dominated facies consists of sands with minor amounts of silt and gravel.

The Ringold Formation in this area is made up of fluvial gravel with minor amounts of silt and sand. This unit ranges in thickness from 5.8 to 17.7 m (19 to 58 ft) in the 100-D Area. In several wells drilled in this area a layer of cemented ripup clasts was observed in split-spoon samples at a depth of 25.6 to 25.9 m (84 to 85 ft)

The uppermost aquifer in the area of the chromium hot spot plume is contained within the Ringold Formation Unit E and is under unconfined hydraulic conditions. Groundwater in this area typically flows to the west-northwest at a velocity of approximately 0.3 m/day (1 ft/day).

As described above, chromium contamination exists in the unconfined aquifer near the Columbia River (Figure 2). This chromium is entering the river, and carries with it the potential to harm aquatic organisms, specifically young salmon. Two remediation techniques are currently being applied to reduce chromium influx to the Columbia River: pump and treat and In Situ Redox Manipulation (ISRM). The latter uses a strongly oxidizing chemical to reduce native ferric iron present in the aquifer to ferrous iron. This altered environment reduces the hexavalent chromium in groundwater to trivalent chromium, which is much less mobile than hexavalent chromium and far less toxic to salmon.

The current method of emplacing the ISRM barrier is to drill vertical boreholes into the aquifer, pump a solution of reductant into the well, and withdraw the reductant after it has reacted with the aquifer materials. The radius of influence for the injected solution is approximately 12 m, (40 ft), so the wells must be drilled on 10-m (35-ft) spacings so the reduced zones will overlap. In a current application of the remediation technology, the ISRM barrier is planned to reach 2200 feet in length parallel to the Columbia River. Anticipated ancillary studies involve design and installation of a test section of an innovative delivery method for use in a tracer test in an uncontaminated aquifer, and it is likely that the selected technology would participate in these studies during the Base contract - Phase 1 effort. The extent of the tracers will be monitored using vertical monitoring with the capability of collecting depth-discrete samples. If successful, subsequent studies will be conducted involving the installation of the innovative delivery technique for creation of a test section of an ISRM barrier in a contaminated aquifer, and it is likely that the selected technology would participate in these studies during the Optional - Phase 2 effort.

Technologies that can improve on the baseline drilling and emplacement techniques are desired. For example, methods that could effectively enhance treatment delivery coverage and distribution would be desired, such as horizontal drilling and subsequent subsurface delivery of agents through the top portion of the unconfined aquifer. In this example, the successful technology would have the ability to deliver reductant to the top 5 meters of the unconfined aquifer, allow the solution to react with the formation, then remove the reacted fluid so potentially harmful byproducts do not degrade the aquifer.

The goal of this project is to design, develop, and demonstrate improved methods of accessing this difficult geologic environment and delivering agents to aid in remediation of contaminants. Qualifying technologies can be a combination of technologies integrated together, and should be capable of meeting the identified field performance requirements. Expeditious field demonstrations at DOE sites that include Hanford are desired for qualifying technologies, and a full scale demonstration at DOE Hanford is anticipated. To that end, the following are anticipated performance requirements that would be required for a full-scale demonstration at a Hanford 100-D demonstration site:

- ▶ Improved techniques to deliver an aqueous chemical to the upper 10 m of the unconfined aquifer in the Hanford formation and Ringold Formation. These units, as described, contain cobbles and boulders and are generally heterogeneous. These conditions negatively influence conventional directional drilling techniques.
- ▶ Accurate location of delivery vehicle (for example, drill head): attitude and accuracy (for example, how accurately is well location known in three dimensions and how closely can they be placed)
- ▶ Complete permeation of all portions of the heterogeneous upper aquifer with the chemical.
- ▶ Demonstration that innovative emplacement technique does not affect aquifer permeability.
- ▶ Withdrawal of a high percentage of the chemical from the formation after several hours of reaction time.
- ▶ Demonstration that emplacement and withdrawal of the reducing chemical was successful (i.e., a permeable reactive barrier was created that effectively stabilizes hexavalent chromium in the aquifer).
- ▶ The technique should be minimally invasive and produce a minimum amount of Investigative Derived Waste (IDW).
- ▶ Ability to minimize operational time including rapid site mobilization, completion of operations, and demobilization. The technology should operate reliably, with minimal scheduled or unscheduled outages for maintenance or repair.

- Demonstrated cost savings compared to baseline drilling and injection methods, and able to operate within the Environmental, Safety, and Health requirements and regulatory and stakeholders requirements at the demonstration site.

### **References**

- (1) Oak Ridge Site Visit documentation, June 19, 2001, conducted for PRDA No. DE-RA-01NT41178, "Advancements for Delivering *In Situ* Treatment for Soil and Groundwater Contamination in Difficult Conditions at DOE Sites," posted on the NETL business page at: <http://www.netl.doe.gov/business/solicit/>
- (2) Hanford Site Visit documentation, June 21, 2001, conducted for PRDA No. DE-RA-01NT41178, "Advancements for Delivering *In Situ* Treatment for Soil and Groundwater Contamination in Difficult Conditions at DOE Sites," posted on the NETL business page at: <http://www.netl.doe.gov/business/solicit/>
- (3) DOE-Oak Ridge homepage (<http://www.oakridge.doe.gov/>) and Oak Ridge Site Technology Coordination Group (STCG) Website for technology need statements (<http://www.em.doe.gov/techneed/>). See STCG number: ORHY-20.
- (4) DOE-Hanford homepage (<http://www.hanford.gov>) and Hanford Site Technology Coordination (STCG) Website for technology need statements (<http://www.pnl.gov/stcg>). See Hanford STCG Need Numbers: RL-SS25, RL-SS11, RL-SS04, RL-SS12, and RL-SS07.
- (5) DOE-Environmental Management homepage link to all DOE sites and their technology need statements. (<http://www.em.doe.gov/info/scitech.html>)
- (6) TechCon (Argonne National Lab) Website: <http://web.ead.anl.gov/TechCon/Projects/dnapl/description/index.cfm>
- (7) Laurenz, J.E., 2000, In Situ Redox Manipulation Barrier Well Completion Report for the 100-HR-3 Groundwater Operable Unit, FY2000, Prepared for the U.S. Dept. Of Energy, Richland Operations Office, Submitted by Bechtel Hanford, Inc., BHI-01381, 34 pp. Go to the Richland Environmental Restoration Project Internet Library and then select the document BHI01381. (<http://www.bhi-erc.com/library/bhi.htm>)
- (8) Weekes, D.C. and Jackson, R.L., 2000, Description of Work for Fiscal Years 1999 and 2000 Drilling Within the Chromium Plume West of the 100-D/DR Reactors, Prepared for the U.S. Dept. Of Energy, Richland Operations Office, Submitted by Bechtel Hanford, Inc., BHI-01237, 99 pp. Go to the Richland Environmental Restoration Project Internet Library and then select the document BHI01237. (<http://www.bhi-erc.com/library/bhi.htm>)
- (9) Remedial Design Report and Remedial Action Work Plan for the 100-HR-3 Groundwater Operable Unit In Situ Redox Manipulation, 2000, 118 pp. Go to the Richland Environmental Restoration Project Internet Library at this website: [http://www.bhi-erc.com/library/doe\\_rl/rl99-51.pdf](http://www.bhi-erc.com/library/doe_rl/rl99-51.pdf)

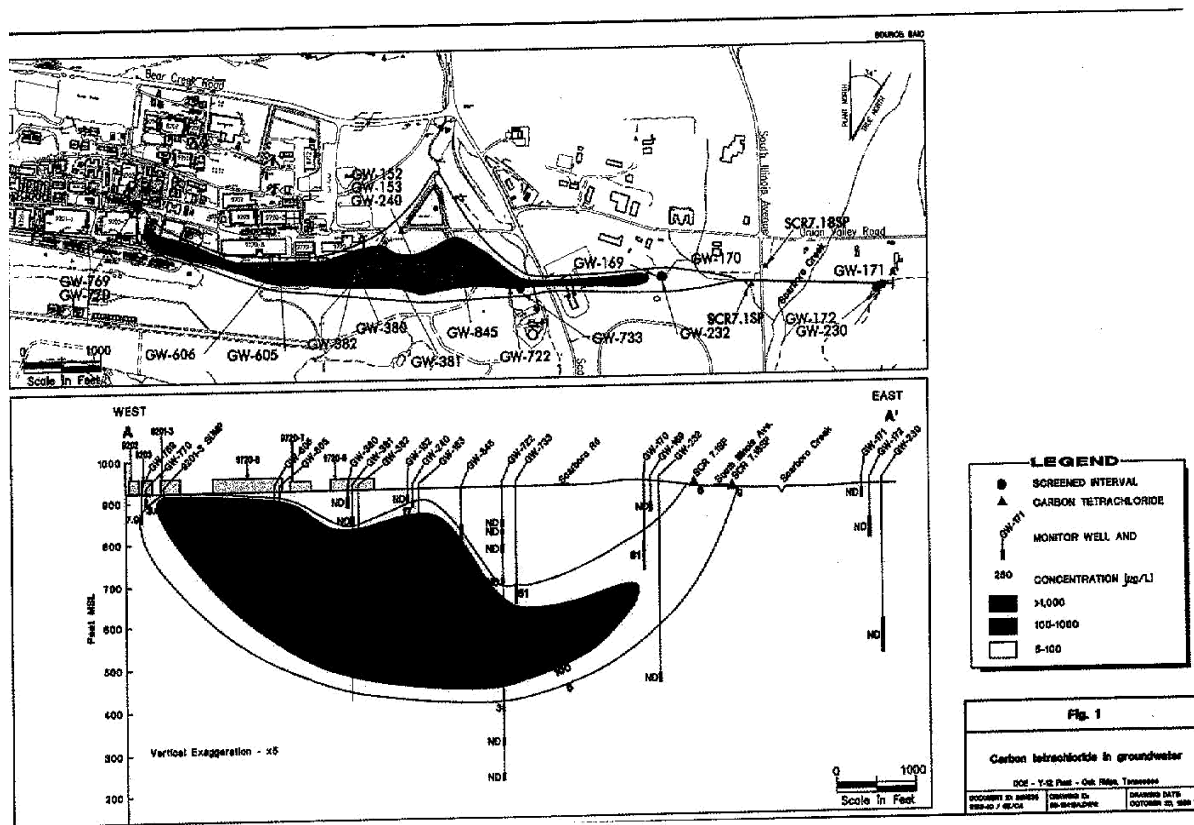


Figure 1. Oak Ridge Y-12 Plant and location of carbon tetrachloride in groundwater.



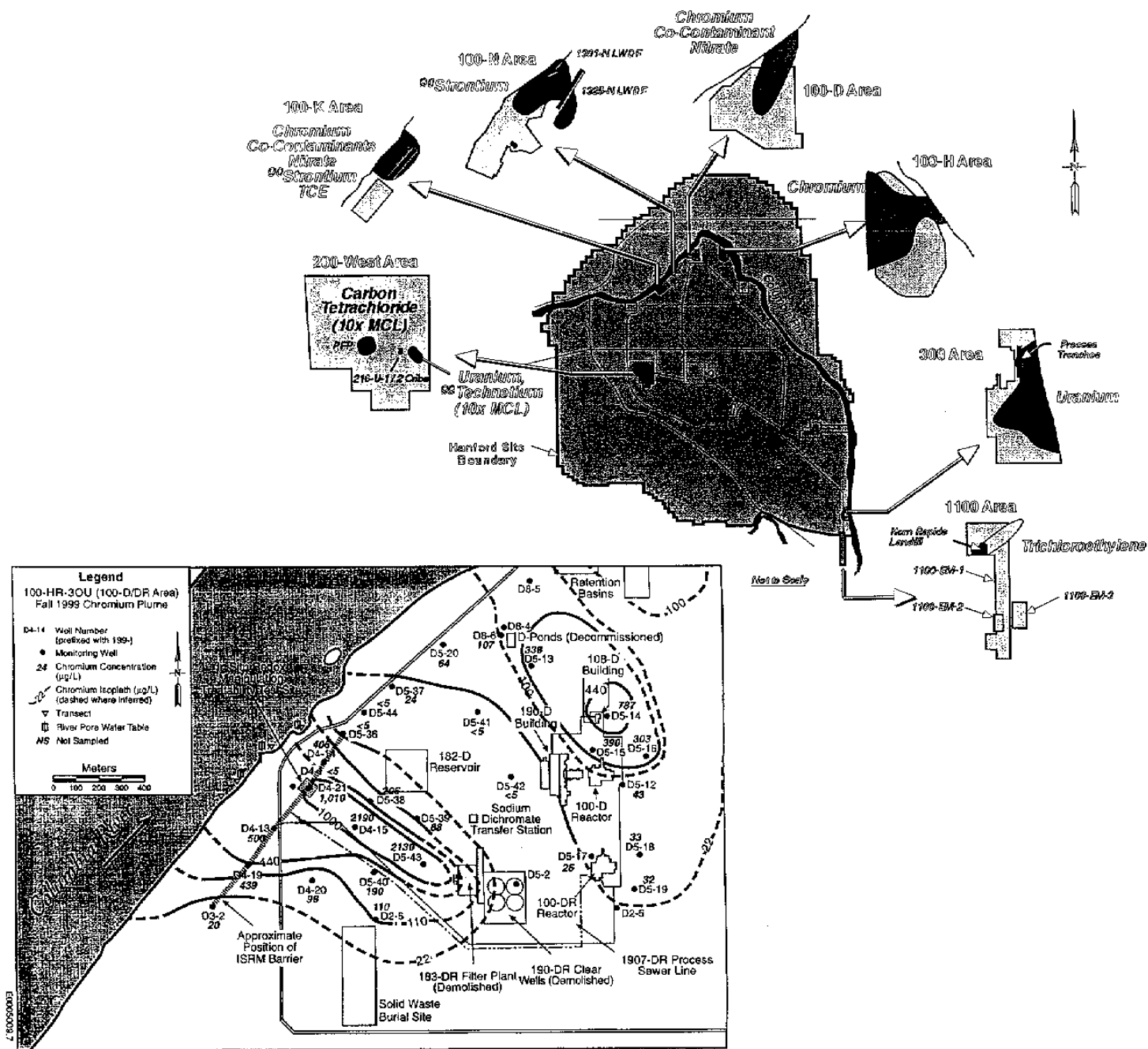


Figure 2. Hanford Site groundwater contaminant plumes (top) and the 100-D Area chromium plume (bottom).

**A.1 INTENTION TO PROPOSE (DEC 1999) -- SOLICITATION NUMBER: DE-RA26-02NT41178**

WE \_\_\_\_\_ DO \_\_\_\_\_ DO NOT INTEND TO SUBMIT A PROPOSAL.

NAME AND ADDRESS OF FIRM OR ORGANIZATION (INCLUDING ZIP CODE)

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\_\_\_\_\_  
AUTHORIZED SIGNATURE (Optional for E-Mail Responses)

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\_\_\_\_\_  
TYPED OR PRINTED NAME AND TITLE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TELEPHONE NO.

\_\_\_\_\_  
FACSIMILE NO.

\_\_\_\_\_  
E-MAIL ADDRESS

Please return this form to:

MAIL TO: U.S. Department of Energy  
National Energy Technology Laboratory  
ATTN: D. Denise Riggi  
P.O. Box 880  
Morgantown, WV 26507-0880

VIA FACSIMILE: (304) 285-4683

VIA E-MAIL: driggi@netl.doe.gov

# SECTION A - SOLICITATION/CONTRACT FORM

OMB Approval No. 9000-0008

<b>SOLICITATION, OFFER AND AWARD</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) ▶		RATING		PAGE OF PAGES	
2. CONTRACT NO.		3. SOLICITATION NO. DE-RA26-02NT41178		4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED <b>October 31, 2001</b>	
6. REQUISITION/PURCHASE NO.		7. ISSUED BY U.S. Department of Energy, National Energy Technology Laboratory P.O. Box 880, 3610 Collins Ferry Road Morgantown, WV 26507-0880		8. ADDRESS OFFER TO (If other than Item 7)			

NOTE: In sealed bid solicitations, "offer" and "offeror" mean "bid" and "bidder."

## SOLICITATION

9. Sealed offers in original and \_\_\_\_\_ copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in \_\_\_\_\_ until \_\_\_\_\_ local time \_\_\_\_\_.

(Hour) (Date)

CAUTION — LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL: ▶	A. NAME D. Denise Riggi		B. TELEPHONE NO. (NO COLLECT CALLS)		C. E-MAIL ADDRESS driggi@netl.doe.gov
			AREA CODE 304	NUMBER 285-4241	

## 11. TABLE OF CONTENTS

(X)	SEC.	DESCRIPTION	PAGE(S)	(X)	SEC.	DESCRIPTION	PAGE(S)
PART I — THE SCHEDULE				PART II — CONTRACT CLAUSES			
	A	SOLICITATION/CONTRACT FORM			I	CONTRACT CLAUSES	
	B	SUPPLIES OR SERVICES AND PRICES/COSTS		PART III — LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH.			
	C	DESCRIPTION/SPECS./WORK STATEMENT			J	LIST OF ATTACHMENTS	
	D	PACKAGING AND MARKING		PART IV — REPRESENTATIONS AND INSTRUCTIONS			
	E	INSPECTION AND ACCEPTANCE		K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS		
	F	DELIVERIES OR PERFORMANCE					
	G	CONTRACT ADMINISTRATION DATA		L	INSTRS., CONDS., AND NOTICES TO OFFERORS		
	H	SPECIAL CONTRACT REQUIREMENTS		M	EVALUATION FACTORS FOR AWARD		

## OFFER (Must be fully completed by offeror)

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within \_\_\_\_\_ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8) ▶	10 CALENDAR DAYS %	20 CALENDAR DAYS %	30 CALENDAR DAYS %	CALENDAR DAYS %
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14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated:	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)
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15B. TELEPHONE NUMBER	15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE — ENTER SUCH ADDRESS IN SCHEDULE	17. SIGNATURE	18. OFFER DATE
AREA CODE NUMBER EXT.			

## AWARD (To be completed by Government)

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION	
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c) ( ) <input type="checkbox"/> 41 U.S.C. 253(c) ( )		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified) ▶	ITEM
24. ADMINISTERED BY (If other than Item 7)	CODE	25. PAYMENT WILL BE MADE BY	CODE
26. NAME OF CONTRACTING OFFICER (Type or print)		27. UNITED STATES OF AMERICA (Signature of Contracting Officer)	28. AWARD DATE

IMPORTANT — Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

## **SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS**

### **B.1 ITEMS BEING ACQUIRED (SOW W/DECISION POINT-OPTION) (SEPT 2000)**

The Contractor shall furnish all personnel, facilities, equipment, material, supplies, and services (except as may be expressly set forth in this contract as furnished by the Government) and otherwise do all things necessary for, or incident to, the performance of the following items of work:

Item 1 - Research entitled "[ ]" (Phase [ ]) in accordance with Part III, Section J, Attachment A, Statement of Work.

Item 2 - Research entitled "[ ]" (Phase [ ]) in accordance with Part III, Section J, Attachment A, Statement of Work.

Item 3 - Reports as prescribed in accordance with Part III, Section J, Attachment B, "Reporting Requirements Checklist."

### **B.2 ESTIMATED COST PLUS FIXED FEE (NOV 1997)**

The total estimated cost and fixed fee for the work to be accomplished under this contract is:

#### **Base Contract - Phase I**

Estimated Cost ----- \$

Fixed Fee ----- \$

Total Estimated Cost Plus Fixed Fee ----- \$

#### **Optional - Phase II**

Estimated Cost ----- \$

Fixed Fee ----- \$

Total Estimated Cost Plus Fixed Fee ----- \$

### **B.3 LIMITATION OF FUNDS -- COST PLUS FIXED FEE (JUNE 1998)**

Pursuant to FAR 52.132-22, "Limitation of Funds," total funds in the amount of \$[ ] are obligated herewith and made available for payment of allowable costs and fixed fee to be incurred from the effective date of this contract through the period estimated to end [ ].

### **B.4 OPTION (NOV 1997)**

The Government may elect to require the contractor to perform the option identified in the Statement of Work, Part III, Section J, Attachment A. The Contracting Officer may unilaterally issue a contract modification to exercise this option not later than thirty (30) calendar days before this contract is due to expire. The cost-plus-fixed-fee of this contract will be increased by the amounts identified in Section B for the option. The period of performance for the option shall be extended in accordance with Part I, Section F.

## **SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT**

### **C.1 STATEMENT OF WORK (NOV 1997)**

The Statement of Work is located in Part III -- Section J, Attachment A to this contract.

### **C.2 REPORTS (MAY 1998)**

Reports shall be prepared and submitted in accordance with the reporting requirements described in Part III -- Section J, Attachment B.

## **SECTION D - PACKAGING AND MARKING**

### **D.1 PACKAGING (FEB 1999)**

Preservation, packaging, and packing for shipment or mailing of all work delivered hereunder shall be in accordance with good commercial practice and adequate to insure acceptance by common carrier and safe transportation at the most economical rate(s).

Except for those reports required by the Reporting Requirements Checklist of the contract, which are coded by A (As required) where the urgency of receipt of the report by the Government necessitates the use of the most expeditious method of delivery, reports deliverable under this contract shall be mailed by other than first-class mail, unless the urgency of the deliverable sufficiently justifies the use of first-class mail. The Contractor shall not utilize certified or registered mail or private parcel delivery service for the distribution of reports under this contract without the advance approval of the Contracting Officer except for those reports coded A.

### **D.2 MARKING (JAN 1999)**

Each package, report or other deliverable shall be accompanied by a letter or other document which:

- (1) Identifies the contract by number under which the item is being delivered.
- (2) Identifies the deliverable Item Number or Report Requirement which requires the delivered item(s).
- (3) Indicates whether the Contractor considers the delivered item to be a partial or full satisfaction of the requirement.

For any package, report, or other deliverable being delivered to a party other than the Contracting Officer, a copy of the document shall be simultaneously provided to the office administering the contract, as identified in Section G of the contract, or if none, to the Contracting Officer.

## **SECTION E - INSPECTION AND ACCEPTANCE**

### **E.1 INSPECTION (NOV 1997)**

Inspection of all items under this contract shall be accomplished by the DOE Contracting Officer's Representative (COR), or any other duly authorized Government representative.

### **E.2 ACCEPTANCE (MAR 1999)**

Final acceptance of all work and effort under this contract (including "Reporting Requirements," if any) shall be accomplished by the Contracting Officer.

### **E.3 52.246-9 INSPECTION OF RESEARCH AND DEVELOPMENT (SHORT FORM). (APR 1984)**

The Government has the right to inspect and evaluate the work performed or being performed under the contract, and the premises where the work is being performed, at all reasonable times and in a manner that will not unduly delay the work. If the Government performs inspection or evaluation on the premises of the Contractor or a subcontractor, the Contractor shall furnish and shall require subcontractors to furnish all reasonable facilities and assistance for the safe and convenient performance of these duties.

## **SECTION F - DELIVERIES OR PERFORMANCE**

### **F.1 PERIOD OF PERFORMANCE (BASE CONTRACT WITH OPTION(S)) (SEPT 1999)**

#### **BASE CONTRACT - Phase 1**

The work to be performed under the Base Contract (Reference Part I, Section, B) shall commence on the effective date of the contract and shall continue for [ ] months.

#### **OPTIONAL Phase I I**

If the Option is exercised, the work to be performed under the Contract option (Reference Part I, Section B) shall be for a period of [ ] months from the effective date of the exercised option. This includes time for submission of all reports, review of those reports by DOE, and submission of the approved final report by the Contractor.

### **F.2 PRINCIPAL PLACE OF PERFORMANCE (FEB 1998)**

The principal place of performance under this contract shall be at the Contractor's facility located in [ ].

### **F.3 52.242-15 STOP-WORK ORDER. (AUG 1989) ALTERNATE I (APR 1984)**

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either -

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Termination clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule, the estimated cost, the fee, or a combination thereof, and in any other terms of the contract that may be affected, and the contract shall be modified, in writing, accordingly, if -

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.



(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

## **SECTION G - CONTRACT ADMINISTRATION DATA**

### **G.1 CORRESPONDENCE PROCEDURES (FEB 2000)**

To promote timely and effective administration, correspondence (except for invoices and reports) submitted under this contract shall be subject to the following procedures:

(a) Technical Correspondence

Technical correspondence (as used herein, this term excludes technical correspondence where patent or technical data issues are involved and correspondence which proposes or otherwise involves waivers, deviations, or modifications to the requirements, terms, or conditions, of this contract) shall be addressed to the DOE Contracting Officer's Representative, with an information copy of the correspondence to the DOE Contract Specialist.

(b) Property Correspondence

Property correspondence (as used herein, this term includes correspondence which addresses matters which relate to property issues which come under the contract's Government property provisions) shall be addressed to the DOE Property Administrator, with information copies of the correspondence to the DOE Contracting Officer's Representative and the DOE Contract Specialist.

(c) Indirect Rate Correspondence

All correspondence relating to the establishment, revision, and negotiation of billing and final indirect cost rates shall be addressed to the Contracting Officer for Indirect Cost Rate Management, with information copies of the correspondence to the DOE Contract Specialist.

(d) Correspondence on Patent or Technical Data Issues

Correspondence concerning patent or technical data issues shall be addressed to the Office of Intellectual Property Law, U.S. Department of Energy, Chicago Operations Office, 9800 South Cass Avenue, Building 201, Argonne, IL 60439.

Information copies of correspondence being sent to the Intellectual Property Law Division shall also be sent to the NETL Patent Attorney, the DOE Contract Specialist, and the Contracting Officer's Representative.

(e) Other Correspondence

All other correspondence shall be addressed to the DOE Contract Specialist with information copies of the correspondence to the DOE Contracting Officer's Representative.

(f) Subject Line(s)

All correspondence shall contain a subject line commencing with the contract number, i.e., DE-AC26-00NT[ ], and identifying the specific contract action requested.

### **G.2 SUBMISSION OF VOUCHERS/INVOICES (APR 2001)**

(a) Voucher Form (SF 1034)

In requesting reimbursement, contractors shall use Standard Form 1034 (Public Voucher for Purchases and Services Other Than Personal), and F4220.50 (Statement of Cost). Electronic versions of the SF1034 and the

F4220.50 can be found on the NETL website at <http://www.netl.doe.gov/business/forms/forms.html>. The Statement of Cost shall be supported by the information contained in Paragraph (c) of this clause. Acceptable substitutes for the forms (which provide the same necessary information) may be used.

In accordance with FAR 52.232-25, "Prompt Payment," all invoices shall include the following information:

- (1) Name and address of contractor/vendor
- (2) Invoice date
- (3) Contract number or other authorization for delivery of property or service
- (4) Description, price and quantity of property and services actually delivered or rendered
- (5) Shipping and payment terms
- (6) Name (where practicable), title, phone number and complete mailing address of responsible official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment)
- (7) Name (where practicable), title, phone number and complete mailing address of the person to be notified in the event of a defective invoice.
- (8) Other substantiating documentation or information as required by the contract.

(b) Statement of Cost

The SF 1034 shall be completed so as to make due allowances for the Contractor's cost accounting system. The costs claimed shall be only those recorded costs (including cost sharing) which are authorized for billing by the payment provisions of this contract. If this is a cost-plus-fixed-fee contract, the amount claimed for the fixed fee should be based on a percentage of completion of the work. If this is a cost sharing contract, the "Government Share" must agree with the amount billed on the SF 1034. Any cost sharing or in-kind contributions incurred by the Contractor and/or third party during the billing period must be included in the invoice and adequately supported. Indirect rates claimed shall be billed in accordance with the "Allowable Cost and Payment Clause." The Certification (block 11) must be signed by a responsible official of the Contractor.

(c) Supporting Documentation

Direct costs (e.g., labor, equipment, travel, supplies, etc.) claimed for reimbursement on the Statement of Cost must be adequately supported. The level of detail provided must clearly indicate where the funds were expended. For example, support for labor costs must include the labor category (e.g., program manager, senior engineer, technician, etc.) the hourly rate, and the labor cost per category; equipment costs must be supported by a list of the equipment purchased, along with the item's cost; supporting data for travel must include the destination of the trip, number and labor category of travelers, transportation costs, per diem costs, and purpose of the trip; and supplies should be categorized by the nature of the items (e.g., office, lab, computer, etc.) and the dollar amount per category.

Indirect rates used for billings must be clearly indicated, as well as their basis of application. When the cognizant Administrative Contracting Officer (ACO) or auditor approves a change in the billing rates, include a copy of the approval.

(d) Submission of Voucher

Submit one copy of the original voucher including the certified Statement of Cost and Supporting Documentation to the following payment office:

U. S. Department of Energy  
Oak Ridge Financial Services Center  
P. O. Box 4787  
200 Administration Road  
Oak Ridge, TN 37831

In addition, submit two copies of the voucher including the certified Statement of Cost and Supporting Documentation to the following address:

U. S. Department of Energy  
National Energy Technology Laboratory  
ATTN: Accounts Payable, MS A10  
P.O. Box 880  
Morgantown, WV 26507-0880

(e) Billing Period

Vouchers shall be submitted no more frequently than monthly (unless prior written consent of the Contracting Officer for more frequent billing is obtained). The period of performance covered by vouchers should be the same as covered by any required monthly technical progress reports and/or monthly cost reports.

(f) Payment Method

In accordance with Mandatory Information for Electronic Funds Transfer Payment, payment under this contract will be made utilizing the Automated Clearing House (ACH) network. The payment system is specifically referred to as "Vendor Express."

(g) Defective Invoices

Invoices that are determined to be defective, and therefore not suitable for payment, shall be returned to the Contractor as soon as practicable, specifying the reason(s) why the invoice is not proper.

(h) Status of Payments

The Oak Ridge Financial Service Center (ORFSC) has a system via Internet, in which contractors can request information about payments by invoice, by contract number, and/or by paid date. The system is called Vendor Inquiry Payment Electronic Reporting System (VIPERS) and is available to contractors at the following website: <http://finweb.oro.doe.gov/vipers.htm>. Contractors must have a federal tax identification number (TIN) and then obtain a personal identification number (PIN) to access the system.

**G.3 NOTICE OF INVOICE PROCESSING BY SUPPORT CONTRACTOR (DEC 1999)**

A support service contractor performs the function of processing of all invoices submitted to the National Energy Technology Laboratory, against its awards. Therefore, this contractor has access to your business confidential cost/rate information. A special provision in this contractor's award requires the confidential treatment by all contractor employees of any and all business confidential information of other contractors and financial assistance recipients to which they have access.

## **SECTION H - SPECIAL CONTRACT REQUIREMENTS**

### **H.1 CONSECUTIVE NUMBERING (JAN 1999)**

Due to automated procedures employed in formulating this document, clauses and provisions contained within it may not always be consecutively numbered.

### **H.2 TECHNICAL DIRECTION (JUNE 1998)**

- (a) Performance of the work under this contract shall be subject to the technical direction of the Contracting Officer's Representative (COR). The term "technical direction" is defined to include, without limitation:
  - (1) Directions to the Contractor which redirect the contract effort, shift work emphasis between work areas or tasks, required pursuit of certain lines of inquiry, fill in details or otherwise serve to accomplish the contractual Statement of Work.
  - (2) Provision of written information to the Contractor which assists in the interpretation of drawings, specifications or technical portions of the work description.
  - (3) Review and, where required by the contract, approval of technical reports, drawings, specifications and technical information to be delivered by the Contractor to the Government under the contract.
- (b) Technical direction must be within the scope of work stated in the contract. The COR does not have the authority to, and may not, issue any technical direction which:
  - (1) Constitutes an assignment of additional work outside the Statement of Work;
  - (2) Constitutes a change as defined in the contract clause entitled "Changes";
  - (3) In any manner causes an increase or decrease in the total estimated contract cost, the fixed fee (if any), or the time required for contract performance;
  - (4) Changes any of the expressed terms, conditions or specifications of the contract; or
  - (5) Interferes with the Contractor's right to perform the terms and conditions of the contract.
- (c) All technical directions shall be issued in writing by the COR.
- (d) The Contractor shall proceed promptly with the performance of technical directions duly issued by the COR in the manner prescribed by this clause and within the authority under the provisions of this clause. If, in the opinion of the Contractor, any instruction or direction by the COR falls within one of the categories defined in (b)(1) through (5) above, the Contractor shall not proceed but shall notify the Contracting Officer in writing within five (5) working days after receipt of any such instruction or direction and shall request the Contracting Officer to modify the contract accordingly. Upon receiving the notification from the Contractor, the Contracting Officer shall:
  - (1) Advise the Contractor in writing within thirty (30) days after receipt of the Contractor's letter that the technical direction is within the scope of the contract effort and does not constitute a change under the "Changes" clause of the contract; or
  - (2) Advise the Contractor within a reasonable time that the Government will issue a written change order.

- (e) A failure of the Contractor and Contracting Officer to agree that the technical direction is within the scope of the contract, or a failure to agree upon the contract action to be taken with respect thereto shall be subject to the provisions of the clause entitled "Disputes - Alternate I".

### **H.3 MODIFICATION AUTHORITY (NOV 1997)**

Notwithstanding any of the other provisions of this contract, the Contracting Officer shall be the only individual authorized to:

- (a) accept nonconforming work,
- (b) waive any requirement of this contract, or
- (c) modify any term or condition of this contract.

### **H.4 GOVERNMENT PROPERTY AND DATA (JAN 1999)**

- (a) Except as otherwise authorized by the Contracting Officer in writing, the Contractor is not authorized to acquire as a direct charge item under this contract any equipment (including office equipment), furniture, fixtures or other personal property items.
- (b) Acquisition Authorization Requirements
  - (1) In the course of performance of this contract, the Contractor may only acquire and direct charge to this contract such items on the "List of Government Property -- Contractor Acquired" (Part III - Section J, Attachment [ ]) to this contract.
  - (2) The Contractor may request authorization for acquisition of additional items from the Contracting Officer. Any such request shall include an analysis of the most economical method of acquisition (e.g., lease versus purchase) and shall describe the material equity arising from any proposed lease arrangement, such as option credits.
  - (3) Any changes in the acquisition authorization shall be reflected in a modification to this contract which revises the "List of Government Property -- Contractor Acquired" (Part III -- Section J, Attachment [ ]) to this contract.
  - (4) Authorization to acquire does not constitute consent to the placement of a subcontract.
- (c) Government-Furnished Property and Data

Except as otherwise authorized by the Contracting Officer in writing, only that property and data specifically included in the "List of Government-Furnished Property" (Part III -- Section J, Attachment [ ]) to the contract, shall be furnished.
- (d) Reporting Requirements

The reports required shall be submitted in accordance with 48 CFR 945 and the reporting requirements set forth in Part III, Section J, Attachment B.

The reports are to include all capital equipment and sensitive items acquired or furnished under this contract, whether or not listed on the attachments referenced above.

#### **H.5 KEY PERSONNEL/PROGRAM MANAGER (MAR 1998)**

The key personnel, which includes the Program Manager, specified below, are considered to be essential to the work being performed under this award; moreover, any changes to these personnel require prior DOE Contracting Officer's written approval.

The Program Manager shall serve as the Contractor's authorized supervisor for technical and administrative performance of all work hereunder. The Program Manager shall receive and execute, on behalf of the Contractor, such technical directions as the DOE Contracting Officer's Representative may issue within the terms and conditions of the contract.

The following is a list of key personnel that have been approved for this contract:

<u>Name</u>	<u>Title</u>
[ ]	[ ]

Prior to diverting any of the specified individuals, the Contractor shall notify the Contracting Officer not less than thirty (30) calendar days prior to the diversion or substitution of key personnel and shall submit a written justification (including qualifications of proposed substitutions) to permit evaluation. The proposed changes will be approved in writing at the sole discretion of the Contracting Officer, with concurrence of the Contracting Officer's Representative.

#### **H.6 TRAVEL AND PER DIEM COSTS (FEB 1998)**

Costs incurred by contractor personnel for travel, including costs of lodging, other subsistence, and incidental expenses, shall be considered to be reasonable and allowable only to the extent that they do not exceed the rates and amounts set by Subchapter I of Chapter 57 of Title 5, United States Code, or by the Administrator of General Services or the President (or his designee) pursuant to any revision of such subchapter; and are allowable pursuant to the "Allowable Cost and Payment" clause, FAR 52.216-7.

Foreign travel shall be subject to DEAR 952.247-70.

#### **H.7 PRIOR APPROVAL REQUIREMENTS FOR PLACEMENT OF SUBCONTRACTS/CONSULTANTS (OCT 1998)**

The Contractor shall obtain the Contracting Officer's written consent before placing any subcontract, including consultants, for which advance notification is required under FAR 52.244-2, "Subcontracts".

Any request for subcontract/consultant approval shall include the elements prescribed by FAR 52.244-2, including subcontractor/consultant Representations and Certifications. For consultants the Contractor will obtain and furnish information supporting the need for and selection of such consultant services and the reasonableness of the fees to be paid, including, but not limited to, whether fees to be paid to any consultant exceed the lowest fee charged by such consultants to others for performing consulting services of a similar nature.

Except as may be expressly set forth therein, any consent by the Contracting Officer to the placement of subcontracts and/or consultants shall not be construed to constitute approval of the subcontractor or any subcontract terms or conditions, determination of the allowability of any cost, revision of this contract or any of the respective obligations of the parties thereunder, or creation of any subcontractor privity of contract with the Government.

The Contractor is hereby given consent to the placement of the following subcontractors, which were evaluated during negotiations:

[ ]

Notwithstanding this consent, the Contractor shall ensure compliance with FAR 52.244-2. Also, since these subcontracts and/or consultants have as a purpose the conduct of research, development and demonstration work, they must additionally contain all applicable flow-down clauses contained in Part II, Section I.

#### **H.8 SUBCONTRACTOR FACILITIES CAPITAL COST OF MONEY (FEB 1998)**

To the extent a subcontractor proposes to recover as an element of proposed cost any Facilities Capital Cost of Money (FCCOM) from a higher tier subcontractor or from the prime contractor, the FCCOM cost principle (FAR 31.205-10) shall apply to subcontracts and new scope modifications issued thereto which are fee bearing cost reimbursement type or negotiated fixed price type.

To the extent a subcontractor is eligible to recover yet does not propose as an element or proposed cost any Facilities Capital Cost of Money (FCCOM) from a higher tier subcontractor or from the prime contractor, the higher tier subcontractor or the prime contractor shall insert the following provision in any such subcontract or new scope modification issued thereto:

Waiver of Facilities Capital Cost of Money (FAR 52.215-17, OCT 1997)

The Contractor did not include facilities capital cost of money as a proposed cost of this contract. Therefore, it is an unallowable cost under this contract.

The Contractor agrees to insert the substance of this clause, including this paragraph (c) altered as necessary for proper identification of the parties, in any subcontract placed hereunder which is a fee bearing cost reimbursement or negotiated fixed price type.

#### **H.9 REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF THE OFFEROR (JUNE 1998)**

The Representations, Certifications and Other Statements of the Offeror for this contract are hereby incorporated by reference.

#### **H.10 INDIRECT COSTS (MAY 1998)**

Pending establishment of final indirect cost rates for any period, billing, and reimbursement of indirect costs shall be made on the basis of provisional rates approved by the Contracting Officer. The following rates are the Contracting Officer approved rates as of the date of this contract:

<u>Indirect Cost</u>	<u>Base of Application</u>	<u>Provisional Rate(s) Contractor's Fiscal Year(1)</u>
		FY[ ] FY[ ] FY[ ]
Overhead	[ ]	[ ] [ ] [ ]
G&A	[ ]	[ ] [ ] [ ]

(1) For Contractor's FY beginning [ ] and ending [ ].

If, during the period of performance the contractor's provisional rates change, the contractor shall notify the Contracting Officer in writing. The contractor shall also submit this notification to the cognizant Government audit agency and the cognizant Government agency for administration if this contract has been delegated. After notification from the cognizant administration agency and/or audit agency, the Contracting Officer shall modify the contract incorporating the DOE-approved provisional rates for the current period.



If, during the period of performance of this contract, provisional rates have not been established for a particular fiscal year via a contract modification, then the contractor shall continue to bill those rates most recently approved by the Contracting Officer, until such time as the contract is modified to reflect the most current approved rates.

#### **H.11 INDIRECT COSTS (NOV 1997)**

Pending establishment of final indirect cost rates for any period, billing and reimbursement of indirect costs shall be made on the basis of provisional rates recommended by the cognizant Government auditor. When a rate change occurs, and after it has been audited and approved by the cognizant Government auditor, the contractor shall inform the Contracting Officer by letter of the indirect rate change. This notification shall include a copy of the cognizant auditor's approval and the cost impact of the rate change on the program.

#### **H.12 GUARANTEED FINAL REPORT (NOV 1997)**

Notwithstanding the applicable cost principles of the Federal Acquisition Regulation (FAR) and the DOE Acquisition Regulation (DEAR) in effect on the date of this contract, and as authorized by Paragraph (a) of the clause of this contract entitled "Allowable Cost and Payment," the contractor agrees to manage this contract in such a manner so as to guarantee to the Government the delivery of an acceptable Final Report. It is the contractor's responsibility to ensure at all times that adequate funds remain to cover all allowable costs necessary for the preparation and delivery of the acceptable Final Report. All costs incurred by the contractor during preparation and delivery of the acceptable Final Report that are in excess of the funds remaining in the contract shall be borne by the contractor.

#### **H.13 COMPLIANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS (FEB 1998)**

In performing work under this contract, the Contractor shall comply with all relevant federal, state, and local statutes, ordinances, laws, and regulations.

#### **H.14 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) -- PRIOR APPROVALS (JAN 2000)**

The National Environmental Policy Act of 1969 (NEPA) requires that all Federal agencies consider the impacts of their projects on the human environment. As part of the DOE's NEPA requirements, the Contractor shall be required to supply to the DOE certain environmental information. DOE funds may only be expended by the Contractor on [INSERT ACTIVITIES THAT CAN BE PERFORMED UNTIL THE NEPA DOCUMENT IS SIGNED, i.e., preliminary designs or drawings] activities, until DOE notifies the Contractor that all NEPA requirements have been satisfied.

#### **H.15 CONTRACTOR PRESS RELEASES (APR 1998)**

The DOE policy and procedure on news releases requires that all Contractor press releases be reviewed and approved by DOE prior to issuance. Therefore, the Contractor shall, at least ten (10) days prior to the planned issue date, submit a draft copy to the Contracting Officer of any planned press releases related to work performed under this contract. The Contracting Officer will then obtain necessary reviews and clearances and provide the Contractor with the results of such reviews prior to the planned issue date.

#### **H.16 PERMITS AND LICENSES (JAN 1999)**

Within sixty (60) days of award, the Contractor shall submit to the DOE Contracting Officer Representative (COR) a list of ES&H approvals that, in the Contractor's opinion, shall be required to complete the work under this award. This list shall include the topic of the approval being sought, the approving authority, and the expected submit/approval schedule. The COR shall be notified as specific items are added or removed from the list and processed through their approval cycles.

The Contractor agrees to include this clause in their first-tier subcontracts and agrees to enforce the terms of this clause.

#### **H.17 QUALITY ASSURANCE/QUALITY CONTROL (JUNE 1998)**

The Contractor shall implement the DOE work using Quality Assurance/Quality Control measures as appropriate to:

- (a) Achieve accuracy, precision, and reproducibility of data adequate to fulfill the objectives of the work to be performed under this award;
- (b) Control experimental operations using accepted technical standards, instruction, and other appropriate means commensurate with the complexity and the risk of the work;
- (c) Identify, control and maintain components, equipment, facilities, hardware and materials;
- (d) Control handling, storage, shipping. Cleaning and preservation to prevent damage, loss or deterioration;
- (e) Control calibration, maintenance, accountability, and use of measuring and testing equipment used for monitoring and data collection;
- (f) Ensure that designs use sound engineering/scientific principles and appropriate standards and demonstrate that equipment and processes performed as intended;
- (g) Ensure that purchased items and services meet established specifications and requirements;
- (h) Incorporate inspections as appropriate;
- (i) Continually improve the quality of the work done for DOE through the improvement of work practices guided by internal performance assessment.

#### **H.18 SAFETY & HEALTH AND ENVIRONMENTAL PROTECTION (JUNE 1998)**

- (a) The Contractor shall implement the DOE work in accordance with all applicable Federal, State and local law as, including codes, ordinances and regulations, covering safety, health and environmental protection.
- (b) The Contractor agrees to include paragraph (a) of this clause in first-tier subcontracts and agrees to enforce the terms of this clause.

#### **H.19 CONTRACTOR LICENSING (APR 1998)**

- (a) Limited Rights Data Or Restricted Computer Software

Except as may be otherwise specified in this contract as data not subject to this paragraph, the contractor agrees that upon written application by DOE, it will grant to the Government for purposes of practicing [ ], by or for the Government for the purpose of remediation or decontamination of chemically contaminated or radioactive sites, a nonexclusive license in any limited rights data or restricted computer software on terms and conditions reasonable under the circumstances including appropriate provisions for confidentiality; provided, however, the contractor shall not be obligated to license any such data or software if the contractor demonstrates to the satisfaction of the Director of Environmental and Waste Management or designee that such data are being supplied by the contractor or its licensees in sufficient quantity and at reasonable prices to satisfy DOE needs, or the contractor or its licensees have taken effective steps to so supply such data in the form of results obtained by its use.

(b) Background Patents

"Background Patent" means a domestic patent covering an invention or discovery which is not a subject invention and which is owned or controlled by the contractor at any time through the completion of this contract, infringement of which cannot reasonably be avoided upon the practice of any specific process, method, machine, manufacture or composition of matter (including relatively minor modifications thereof) which is a subject of the research, development, or demonstration work performed under this contract.

The contractor agrees that upon written application by DOE, it will grant to the Government for purposes of practicing [ ] by or for the Government for the purpose of remediation or decontamination of chemically contaminated or radioactive sites, nonexclusive license(s) under any background patent on terms that are reasonable under the circumstances. If, however, the contractor believes that exclusive or partially exclusive rights are necessary to achieve expeditious commercial development or utilization, then a request may be made to the Director of Environmental and Waste Management or designee for approval of such licensing by the contractor. Notwithstanding the foregoing, the contractor shall not be obligated to license any background patent if the contractor demonstrates to the satisfaction of the Director of Environmental Restoration and Waste Management or designee that the contractor or its licensees are supplying the subject matter covered by said background patent in sufficient quantity and at reasonable prices to satisfy DOE needs, or have taken effective steps or within a reasonable time are expected to take effective steps to so supply the subject matter.

(c) Licensing Intellectual Property for Performing the Contract

The contractor also agrees and does hereby grant to the Government a royalty-free, non-exclusive license under any background patent or to any limited rights or restricted computer software for purposes of practicing a subject of this contract by or for the Government in research, development, or demonstration under this contract.

**H.20 RIGHTS IN TECHNICAL DATA (EM-INSPECTION) (SEPT 1999)**

(a) Withholding of Limited Rights Data.

Notwithstanding the inclusion of clause FAR 52.227-16, Additional Technical Data Requirements, in this Contract or any provision of this Contract specifying the delivery of technical data, the Contractor may withhold limited rights data from delivery, provided that the Contractor furnishes in lieu of any such limited rights data so withheld technical data disclosing the source, size, configuration, mating and attachment characteristics, functional characteristics, and performance requirements ("Form, Fit and Function" data, e.g., specification control drawing, catalog sheets, envelope drawings, etc.), or a general description of such limited rights data where "Form, Fit and Function" data are not applicable. Such data shall be subject to the provision of clause FAR 52.227-14, Rights in Data--General with Alternative V, paragraph (j), "Inspection rights," and paragraph (g), "Protection of limited rights data and restricted computer software," and to the "Contractor Licensing" provisions in Section H.

1. The limited rights data subject to clause FAR 52.227-14 are listed below **[OR in Attachment [ ] attached hereto and made a part hereof]**. This listing of data, which are asserted by the Contractor to be limited rights data, does not constitute an admission by the Government that the data is in fact limited rights data.

**[CONTRACTOR TO IDENTIFY/CERTIFY SPECIFIC DATA ASSERTED TO BE PROPRIETARY (STATEMENT FROM CONTRACTOR)]**

2. Subject to clause FAR 52.227-14 paragraph (j), any limited rights data specifically used in the performance of this Contract shall, at the option of the Contracting Officer, be available for inspection by a designee of the Contracting Officer at the project facility.

3. The Contractor shall not introduce or utilize any limited rights data not identified in paragraph (1) above in the performance of the contract work without the expressed written permission of the Contracting Officer.

(b) Minimum Technical Data Deliverable with Unlimited Rights.

Notwithstanding any other provision of this Contract, the following technical data first produced under this Contract as a minimum, shall be delivered to the DOE with unlimited rights:

**[COR TO SPECIFY WHAT DATA S/HE WANTS TO HAVE DELIVERED WITH UNLIMITED RIGHTS]**

**H.21 RESTRICTED COMPUTER SOFTWARE (EM-INSPECTION) (SEPT 1999)**

The restricted computer software subject to the provisions of clause FAR 52.227-14, Rights in Data--General with Alternative V, paragraphs (j) and (g), and to the provisions of the clause entitled "Contractor Licensing", are listed below. This list of software programs, which are asserted by the Contractor to be restricted computer software, does not constitute an admission by the Government that the software is in fact restricted computer software.

**[CONTRACTOR TO IDENTIFY/CERTIFY SPECIFIC SOFTWARE ASSERTED TO BE PROPRIETARY (STATEMENT FROM CONTRACTOR)]**

Subject to clause FAR 52.227-14 paragraph (j), any restricted computer software specifically used in the performance of this Contract shall, at the option of the Contracting Officer, be available for inspection by a designee of the Contracting Officer at the project facility.

The Contractor shall not introduce or utilize any restricted computer software not identified above without advance written notification of the Contracting Officer.

**H.23 LOBBYING RESTRICTION (ENERGY & WATER DEVELOPMENT APPROPRIATIONS ACT, 2000) (DEC 1999)**

The contractor agrees that none of the funds obligated on this award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

A copy of the DOE "Lobbying Brochure" which provides a summary of the statutory and regulatory restrictions regarding lobbying activities for Federal contractors can be found at (<http://www.pr.doe.gov/lobbying.html>)

**H.24 NOTICE REGARDING THE PURCHASE OF AMERICAN-MADE EQUIPMENT AND PRODUCTS -- SENSE OF CONGRESS (DEC 1999)**

It is the sense of the Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available under this award should be American-made.

## **SECTION I - CONTRACT CLAUSES**

### **I.1 52.252-2 CLAUSES INCORPORATED BY REFERENCE. (FEB 1998)**

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

Federal Acquisition Regulations (Clauses starting with 52): <http://www.arnet.gov/far/index.html>

Department of Energy Regulations (Clauses starting with 952): <http://www.professionals.pr.doe.gov/ma5/MA-5Web.nsf/Procurement/Acquisition+Regulation?OpenDocument>

### **I.2 52.202-1 DEFINITIONS. MAR 2001**

### **I.3 952.202-1 DEFINITIONS.**

### **I.4 52.203-3 GRATUITIES. APR 1984**

### **I.5 52.203-5 COVENANT AGAINST CONTINGENT FEES. APR 1984**

### **I.6 52.203-6 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT. JUL 1995**

### **I.7 52.203-7 ANTI-KICKBACK PROCEDURES. JUL 1995**

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## STATEMENT OF WORK

### **“Advancements for Delivering *In Situ* Treatment for Soil and Groundwater Contamination in Difficult Conditions at DOE Sites”**

#### **A. OBJECTIVES**

DOE Nuclear Weapons Complex sites contain soil and groundwater contamination that provide challenges to efficiently and cost-effectively treat, stabilize, or remove contamination in a wide variety of subsurface conditions. *In situ* treatment can provide numerous advantages over conventional remedial methods such as pump and treat operations for groundwater, including reduction of worker and environmental risk, reduction of secondary waste generation, and reduction of remedial schedules and life cycle costs. Numerous subsurface and surface conditions have presented technical challenges to effectively access, deliver, and distribute *in situ* treatment to a wide class of hazardous and radiological contaminants with technology systems that are acceptable to end-users, regulators, and stakeholders. For example, deep contamination (in excess of 300 feet), lithologies difficult to penetrate or distribute treatment agents within such as conglomeratic sediments and fractured limestone, proximity to natural geomorphic features such as fluvial environments, and manmade structures that provide interferences such as buildings and underground tanks can, singly or combined, produce conditions that hamper design and implementation of *in situ* remediation. The objectives of these research and development projects will be to demonstrate technologies that provide innovative, improved delivery of *in situ* treatment for soil and groundwater contamination at DOE Nuclear Complex Sites. The improved delivery methods will also be required to operate efficiently and cost-effectively in conditions deemed as difficult and challenging. Two research topic areas have been identified to address high priority needs for delivery of *in situ* treatment of soil and groundwater contamination at DOE sites, and are further defined with respect to different classes of hazardous and radioactive contaminants requiring treatment, varying surface and subsurface conditions, and anticipated performance requirements as identified by DOE site end-users. These include: 1) Topic Area 1--Effective Delivery of Bioremediation for Volatile Organic Compound (VOC) Contamination; and 2) Topic Area 2--Effective Delivery of Treatment for Metals and Radionuclides in the Vadose Zone and Groundwater With Minimal Surface Impact in Environmentally Sensitive Areas.

The projects shall be conducted in two phases. In the first phase, advanced design, fabrication, and control/small scale testing of the technology system shall be completed. This may include laboratory, bench scale, and small field-scale testing, as appropriate, to validate the technology system operation and ability to meet performance requirements. In the optional second phase, full scale demonstration of the technology system shall be conducted at a site selected jointly by DOE and the Contractor. The Contractor shall validate field test results using an appropriate independent methodology. Evaluation of the technology performance and cost benefits shall also be completed.

#### **Approach and Defined Tasks**

The Contractor shall identify which of the following technical topical areas they are submitting under: 1) Topic Area 1--Effective Delivery of Bioremediation for Volatile Organic Compound (VOC) Contamination; or 2) Topic Area 2--Effective Delivery of Treatment for Metals and Radionuclides in the Vadose Zone and Groundwater With Minimal Surface Impact in Environmentally Sensitive Areas. The Contractor shall provide their own detailed Statement of Work for the proposed study, but the following format contains selected specific tasks that should be incorporated into the Contractor's Statement of Work, as well as desired deliverables and technical presentations that should also be included. A project review and contract decision point for continuance of the project into Optional Phase II (contract go/no go decision point), shall be included between Phase I and Phase II.

## **BASE CONTRACT - PHASE I**

### **Task 1.n--Coordination and Planning**

This task shall consist of necessary activities to ensure coordination and planning of the project with DOE/NETL, representatives from other DOE sites and the DOE Environmental Management (EM) technology development program. These shall include but are not limited to the following: Project Kick-off Meeting; submission of required NEPA documentation; preparation and submission of documents (e.g., Workplans, Sampling and Analysis Plans, Environmental, Safety, and Health Plans) for site and regulator approval. All tasks must be planned and executed according to DOE Orders, codes and standards, and procedures in place at the host site. Coordination with DOE contractor personnel will also be required.

The Contractor shall define a list of technical success criteria and measures that shall be used upon completion of Phase 1, for review of Phase 1 results, downselection, and continuance of the project into Phase 2. The list shall be submitted to DOE for review and approval.

### **Task 1.n--Controlled Field-Scale Test Workplan**

The Contractor shall develop and submit to DOE for review, a detailed Workplan for the controlled, field-scale testing of the technology system provided by the Contractor to deliver and distribute treatment to targeted subsurface conditions. The site shall be selected jointly by DOE and the Contractor. The objective will be to test under controlled subsurface conditions, the technology system in conditions comparable to those difficult conditions identified at DOE sites. DOE will provide to the Contractor, guidance relative to specific treatment that must be delivered, as well as specific subsurface conditions of interest. The Workplan shall detail the technical and operational elements of this testing. Typical components of a Workplan include, but are not limited to, the following: technology description; field test objectives; experimental design and procedures; sample preparation, equipment, and materials; sampling and analyses plan; data management; data analysis and interpretation; Environmental, Safety, and Health (ES&H) plan; waste management and decontamination plans; and supplementary material (provides more detailed information for sampling plan, quality assurance project plan, ES&H plan, waste management plan, and standard operating procedures). The draft Workplan shall be submitted to the DOE/COR for review and approval. Any revisions shall be made, and the Workplan resubmitted for approval.

### **Task 1.n--Controlled Field-Scale Testing**

The Contractor shall complete the necessary activities to conduct control testing of the technology system at a site selected jointly by DOE and the Contractor. Testing shall be conducted in accordance with the approved Workplan. The testing shall include operation of the technology system and an independent methodology to validate operation. Testing interval shall be the length of time specified in the approved Workplan. Initial test results shall be evaluated, and minor modifications or refinements to the delivery system may be completed to enhance operation of the technology system, and retesting may be completed. The Contractor shall coordinate with the DOE to determine the degree and length of any retesting.

### **Task 1.n-- Reporting**

The Contractor shall prepare and present a briefing of Phase I results, and planned project work for the Optional - Phase II, at a site selected jointly by DOE and the Contractor. This presentation shall take place not less than 45 days before the expiration of the Phase I contract. The contractor shall prepare for review and comments, a draft Topical Report on the Phase I contract activities. This report shall follow the guidelines set forth in the contract and shall include, but not be limited to: delivery system design; Workplans; description of and results from Phase I testing; and cost benefits of technology compared to baselines and alternative technologies. After review and comment by the DOE, the Contractor shall revise the report and submit to DOE. Attendance and presentation at the Annual Industry Programs Conference and the Subsurface Contaminant Focus Area Annual Midyear Review shall also be completed.

The following statement should be inserted between Phase I and Phase II.

**NOTE: At this time the DOE will evaluate the merits of the project to determine if the optional Phase II shall be conducted. The contractor shall not proceed with these Phase II tasks unless the Contracting Officer issues a modification to the contract authorizing the contractor to proceed with Phase II in accordance with provision B.4. If the determination is made not to continue with the Phase II tasks, the topical report submitted under Phase I shall be considered the final report.**

## **OPTIONAL PHASE II**

### **Task 2.n--Coordination/Planning and Site Selection/Assessment in Preparation for Full Scale Demonstration**

This task shall proceed only after the review of the Phase I contract results by DOE and DOE-selected representatives, and the approval to proceed from the DOE/NETL Contracting Officer. This task shall include activities necessary to ensure coordination and planning of the full scale demonstration at a site selected jointly by DOE and the Contractor. These shall include but are not limited to the following: Project Kick-off Meeting; submission of required NEPA documentation; preparation and submission of documents (e.g., Workplans, Sampling and Analysis Plans, Environmental, Safety, and Health Plans) for site and regulator approval. All tasks must be planned and executed according to DOE Orders, codes and standards, and procedures in place at the host site. Coordination with DOE contractor personnel will also be required.

A base map of appropriate scale of the site selected for the full scale demonstration shall be provided to DOE.

### **Task 2.n--Full Scale Demonstration Workplan**

The Contractor shall develop and submit to DOE for review, a detailed Workplan for the full scale demonstration of the technology delivery system. The Workplan shall detail the technical and operational elements of this testing. The Workplan shall be written in the context of the selected test site and shall contain all components required by the host site. The Workplan must be approved prior to site mobilization to the field test site. Typical components of a Workplan include, but are not limited to, the following: technology description; field test objectives; experimental design and procedures; site preparation, equipment, and materials; sampling and analyses plan; data management; data analysis and interpretation; Environmental, Safety, and Health (ES&H) plan; waste management and decontamination plans; public participation; reporting; schedules; regulatory compliance; project organization; and supplementary material (provides more detailed information for field sampling plan, quality assurance project plan, ES&H plan, waste management plan, public participation plan, readiness review plan, regulatory compliance plan, and standard operating procedures). The Workplan shall also include a plan for the verification of the field test results using independent field sampling data (e.g., groundwater samples collected from monitoring wells installed for this purpose), control tests, or other acceptable means. The Workplan shall be submitted to DOE for review and approval. Any modifications must be made, and the Workplan must be resubmitted and accepted for approval.

### **Task 2.n--Full Scale Demonstration**

Contractor shall conduct a full scale demonstration at a site selected jointly by DOE and the Contractor. Task shall include activities necessary to complete verification of these field test results using independent field sampling, control tests, or other acceptable means. Task also includes support activities necessary to complete field testing that shall include, but are not limited to the following: site mobilization/demobilization; site preparation; facilities/utilities requirements; waste management and decontamination; and site restoration. The Workplan must be approved by DOE prior to conducting these activities. The Contractor shall coordinate fully with the demonstration site to perform these activities as planned in the approved Workplan.

Upon conducting the full scale demonstration, and not later than 48 hours from the start of the testing, initial test results from the data acquisition shall be provided in a "Quick Look" report that shall be in a format that is specified in the

approved Workplan. Upon completion of testing, results shall be evaluated with respect to meeting performance goals and providing cost benefits superior to current baseline technologies.

#### **Task 2.n-- Reporting**

The Contractor shall prepare and present a briefing of Phase II results at DOE/NETL or another site selected by DOE. This presentation shall take place not less than 45 days before the expiration of the Phase II contract. The Contractor shall prepare for review and comments, a draft Final Report on the Phase I and Phase II contract activities. This report shall follow the guidelines set forth in the contract and shall include, but not be limited to: delivery system design; Workplans; description of and results from Phase I and Phase II testing; and cost benefits of technology compared to baselines and alternative technologies. After review and comment by the DOE, the Contractor shall revise the report and submit to DOE. Attendance and presentation at the Annual Industry Programs Conference and the Subsurface Contaminant Focus Area Annual Midyear Review shall also be completed.

#### **Deliverables**

The Topical and Final reports shall be submitted in accordance with the "Reporting Requirements Checklist" and the instructions accompanying the checklist that will be provided in the solicitation. In addition, the Contractor shall submit the following:

1. Documentation for coordinating and planning as described in Phase I tasks.
2. Workplan for Phase I controlled field scale testing as described in Phase I tasks.
3. Topical Report, as described in Phase I tasks.
4. Documentation for coordinating and planning, as described Phase II tasks.
5. Base maps of full scale demonstration site as described in Phase II tasks.
6. Workplan for Phase II full scale demonstration as described in Phase II tasks.
7. Quick-Look Report and other data results, as described in Phase II tasks.
8. Final Report, as described in Phase II tasks.

#### **Briefings/Technical Presentations**

1. Kickoff briefing with DOE/NETL and other DOE-selected representatives at site selected jointly by DOE and the Contractor.
2. Briefings at site selected by DOE upon completion of : (1)Phase I; and (2) Phase II.
3. Annual presentations at NETL Annual Industry Programs Contractor Review Meeting.
4. Annual presentations at the Subsurface Contamination Focus Area Midyear Review Meeting.

# REPORTING REQUIREMENTS CHECKLIST

<b>1. AWARDEE:</b> TBD	<b>2. IDENTIFICATION NUMBER:</b> DE-RA26-02NT41178																																								
<b>3. REPORT SUBMISSION ADDRESS:</b> <i>The requested quantity of all required report deliverables shall be submitted to the following address:</i>  <b>NETL AAD DOCUMENT CONTROL BLDG. 921-107</b> <b>U.S. DEPARTMENT OF ENERGY</b> <b>NATIONAL ENERGY TECHNOLOGY LABORATORY</b> <b>P.O. BOX 10940</b> <b>PITTSBURGH, PA 15236-0940</b>																																									
<b>4. PLANNING AND REPORTING REQUIREMENTS:</b> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:60%;"></th> <th style="width:10%;">FORM NO.</th> <th style="width:10%;">FREQ.</th> <th style="width:10%;">NUMBER OF COPIES</th> <th style="width:60%;"></th> <th style="width:10%;">FORM NO.</th> <th style="width:10%;">FREQ.</th> <th style="width:10%;">NUMBER OF COPIES</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;"> <b>A. GENERAL MANAGEMENT</b>   <input checked="" type="checkbox"/> Management Plan  <input checked="" type="checkbox"/> Status Report  <input type="checkbox"/> Summary Report         </td> <td style="vertical-align: top;">None None 1332.2</td> <td style="vertical-align: top;">O M</td> <td style="vertical-align: top;">3 3</td> <td style="vertical-align: top;"> <b>E. 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<b>6. SPECIAL INSTRUCTIONS:</b>  The forms identified in the checklist are available at <a href="http://www.netl.doe.gov/business/forms/forms.html">http://www.netl.doe.gov/business/forms/forms.html</a> . Alternate formats are acceptable provided the contents remain consistent with the form. All <b>technical reports</b> submitted to the DOE <b>must</b> be accompanied by a completed and signed <b>NETL F 510.1-5</b> , addressing patent information.																																									

#### **J.4 GENERAL INSTRUCTIONS FOR THE PREPARATION AND SUBMISSION OF REPORTS (MAR 1999)**

The contractor shall prepare and submit (postage prepaid) the plans and reports indicated on the "Reporting Requirements Checklist" to the addressee identified on the checklist. The level of detail the contractor provides in the plans and reports shall be commensurate with the scope and complexity of the effort and shall be as delineated in the guidelines and instructions contained herein. The prime contractor shall be responsible for acquiring data from any subcontractors to ensure that data submitted are compatible with the data elements which prime contractors are required to submit to DOE.

#### **J.5 MANAGEMENT PLAN (JAN 2000)**

The Management Plan describes the contractor's approach to performing the effort and producing the products identified in the contractual agreement, and the technical, schedule, cost, and financial management control systems to be used to manage performance.

The outline for the Management Plan and a description of the contents follows:

##### **EXECUTIVE SUMMARY**

The executive summary gives DOE/NETL's management a brief, comprehensive overview of the most important aspects of the management plan.

##### **BACKGROUND**

This is a discussion of the background of the project, including the scientific, sociological, legislative, and historical factors, that demonstrates the contractor's understanding of the problems, both technical and management, associated with the project.

##### **SCOPE OF THE PROJECT**

This section gives a brief overview of the project. It should include:

general description of project objectives;  
task titles and short descriptions;  
participants.

##### **WORK BREAKDOWN STRUCTURE (WBS)**

The scope and complexity of the contractual agreement influence the number of levels required. Each descending level represents an increasingly detailed definition of the work elements. Level 1 is the goal or objective of the contractual agreement in its entirety. Level 2 consists of the major work products necessary for achieving the goals of the contractual agreement. Level 3 outlines the major element segments (subsystems) necessary for completing Level 2 elements. Work breakdown structure elements are identified by name and number from a progressive, alphanumeric system. For example:

Example:

WBS Level 1: The overview should describe the philosophy underlying the selected technical approach.

WBS Levels 2 and 3: \_\_\_\_\_

WBS ELEMENT X.X: \_\_\_\_\_(TITLE)

OBJECTIVE: State the objective of the task in a concise manner.

BACKGROUND (Not required for Construction Tasks):

With respect to the project objective, what is the current state of understanding?

Given the state-of-the-art, what are the outstanding issues which must be resolved in order to make progress?

TECHNICAL APPROACH (Not required for Construction Tasks): Describe in detail the manner in which the various issues will be resolved. The following are aspects of the work which should be considered and addressed (along with others you feel appropriate):

What experiments will be performed and why?

What materials will be used?

What are the experimental conditions?

What analytical techniques will be employed?

What will be the approach to modeling?

In answering these questions, you should consider how the various tasks relate to one another and to other relevant ongoing work. Task outputs which feed into other tasks (and vice-versa) should be clearly delineated.

DELIVERABLES (Not required for Construction Tasks): Describe specifically the results of the task. These should include:

raw and reduced data and method of presentation;

brief description of models to be developed;

other key results as appropriate.

## SUPPORT SYSTEMS AND CONTROLS

In this section, the management, technical, and administrative system that will be used to control and execute the project will be described. Examples of the systems include: systems and engineering analysis, quality assurance, environmental, safety and health, legal support, ADP support, and accounting support.

### **J.6 STATUS REPORT (MAR 1999)**

The Status Report is the contractor's project manager brief narrative assessment (by WBS) of the work actually performed and the overall status of the various tasks.

The Status Report provides a concise narrative assessment of the status of the work being performed under the contractual agreement. DOE management uses the report to monitor status and to provide early recognition of potential problem areas. The report highlights changes to objectives, changes to technical approach, relationship to previously planned activities, task variances from baselines in excess of stipulated thresholds by WBS reporting element, causative factors, and actions taken or proposed to resolve them, list of presentations and publications, as well as factors with potential for causing significant variances in the future. Task progress of major accomplishments for each task in bullet form may also be highlighted. The

report identifies open items requiring action by DOE or the contractor. The report also provides a summary assessment of the current situation, including forecast of the near future and the expected impact on project accomplishment.

#### **J.7 MILESTONE SCHEDULE/PLAN (DOE F 1332.3) (MAR 1999)**

The Milestone Schedule Plan documents the planned or baseline project schedule in the standard DOE format (DOE F 1332.3). It includes a summary sheet showing all tasks/elements identified in the Work Breakdown Structure on a single form, and, for complex efforts, a separate sheet for each task/element which gives more detail. The planned events and milestones for each task/element are included. The standard symbols and charting conventions described on the reverse side of the form are used. The summary sheet includes a line labeled "administration," and denotes events such as subcontract awards, project reviews, etc. An associated milestone log (DOE F 4600.3A) provides a narrative description of events and anticipated dates of initiation/completion.

#### **J.8 COST PLAN (DOE F 1332.7) (MAR 1999)**

The Cost Plan establishes the plan for accruing total costs by WBS element for the life of the contractual agreement. The time-phased baseline establishes the basis for the measurement of actual cost accumulation and provides basic information for updating and forecasting budget requirements. The Cost Plan itemizes accrued costs by WBS element for prior fiscal years, the current fiscal year by month, and future fiscal years until completion of the contractual agreement. For projects being managed to the fourth WBS level, additional forms show cost detail for each task individually.

#### **J.9 MILESTONE SCHEDULE/STATUS REPORT (DOE F 1332.3) (MAR 1999)**

The Milestone Schedule/Status Report is used for reporting schedule status and shows the completion status of the activities and events at the same level of detail as shown on the Milestone Schedule Plan. The report also shows changes to the planned schedule. Like the Milestone Schedule/Plan, information is reported by WBS element. DOE Form 1332.3 is used for reporting schedule status.

#### **J.10 COST MANAGEMENT REPORT (DOE F 1332.9) (MAR 1999)**

This is a periodic report that shows the cost status of the contract and is compared with the Cost Plan. Information is reported by WBS element.

#### **J.11 HOT LINE REPORT (NOV 2000)**

The "Hot Line" Report may be used to report a major breakthrough in research, development, or design; an event causing a significant schedule slippage or cost overrun; an environmental, safety and health violation; achievement of or failure to achieve an important technical objective; or any requirement for quickly documented direction or redirection. The report shall be submitted by the most rapid means available, usually electronic, and should confirm telephone conversations with DOE representatives. Identification as a "Hot Line Report" serves notice at each link in the delivery chain that expedition in handling is required. Unless otherwise agreed by the parties involved, DOE is expected to take action and respond in a similarly timely manner. The report should include:

1. Contractor's name and address;
2. Contract title and number;
3. Date;
4. Brief statement of problem or event;
5. Anticipated impacts; and
6. Corrective action taken or recommended.

Hot line reports shall document the incidents listed below:



1. Any single fatality or injuries requiring hospitalization of five or more individuals is to be immediately reported.
2. Any significant environmental permit violation is to be reported as soon as possible, but within 24 hours of the discovery of the incident.
3. Other incidents that have the potential for high visibility in the media are to be reported as quickly as possible, but within 24 hours following discovery.
4. Any failure resulting in damage to Government-owned equipment in excess of \$50,000 is to be reported as quickly as possible, but within 24 hours of the discovery of the failure.
5. Any unplanned event which is anticipated to cause a schedule slippage or cost increase significant to the project is to be reported within 24 hours.
6. Any verbal or written Notice of Violation of any Environmental, Safety, and Health statutes arising from the performance of this contract is to be immediately reported.
7. Any accidental spill or release which is in violation of any Environmental, Safety, and Health statutes arising from the performance of this contract is to be immediately reported, but within 24 hours of the discovery of the accident.
8. Any incident which causes a significant process or hazard control system failure, or is indicative of one which may lead to any of the above defined incidents, is to be reported as soon as possible, but within 5 days of discovery.

The requirement to submit Hot Line Reports for the incidents identified in 1, 2, 3, 6, or 7 is for the sole purpose of enabling DOE officials to respond to questions relating to such events from the media and other public.

When an incident is reported in accordance with 4, 5, 6, 7, or 8, the contractor shall conduct an investigation of its cause and make an assessment of the adequacy of resultant action. A written report is required no later than ten (10) calendar days following the incident and shall include an analysis of the pertinent facts regarding the cause, and a schedule of the remedial events and time periods necessary to correct the action.

When an event results in the need to issue a written or verbal statement to the local media, the statement is to be cleared first; if possible, and coordinated with NETL Communications & Public Affairs Division, the Contracting Officer Representative (COR) and the Contracting Officer.

#### **J.12 JOURNAL ARTICLES, CONFERENCE PAPERS AND PROCEEDINGS GENERATED BY LARGE BUSINESSES FOR DOE REVIEW (SEPT 2000)**

The Contractor shall submit to DOE for review and approval all documents generated by the Contractor, or any subcontractor, which communicate the results of scientific or technical work supported by DOE under this award, whether or not specifically identified in the award, prior to submission for publication, announcement, or presentation. Such documents include journal articles, conference papers and proceedings, etc. Each such document shall be accompanied by a properly completed NETL Form 510.1-5, "Request for Patent Clearance for Release of Contracted Research Documents."

The Contractor shall simultaneously submit a draft version of the document to the DOE COR and the DOE Patent Counsel Office prior to the publication, presentation, or announcement. The document submitted to the DOE Patent Counsel shall be accompanied by a completed NETL Form 510.1-5. The DOE COR and DOE Patent Counsel shall review the draft version of the document and notify the Contractor of approval or recommended changes. The approved final version shall be submitted to the NETL AAD Document Control Coordinator.

The following information shall be provided for conference papers and proceedings, etc.

- Name of conference
- Location of conference (city, state, and country)
- Date of conference (month/day/year)
- Conference sponsor

**J.13 JOURNAL ARTICLES, CONFERENCE PAPERS AND PROCEEDINGS GENERATED BY A SMALL BUSINESS OR NONPROFIT ORGANIZATION FOR DOE REVIEW (SEPT 2000)**

The Contractor shall submit to DOE for review and approval all documents generated by the Contractor, or any subcontractor, which communicate the results of scientific or technical work supported by DOE under this award, whether or not specifically identified in the award, prior to submission for publication, announcement, or presentation. Such documents include journal articles, conference papers and proceedings, etc. Each such document shall be accompanied by a properly completed NETL Form 510.1-5, "Request for Patent Clearance for Release of Contracted Research Documents."

The Contractor shall submit a draft version of the document to the COR prior to the publication, presentation, or announcement. The COR shall review the draft version of the document and notify the Contractor of approval or recommended changes. The final version, along with a completed NETL Form 510.1-5, shall be submitted to the NETL AAD Document Control Coordinator.

The following information shall be provided for conference papers and proceedings, etc.

- Name of conference
- Location of conference (city, state, and country)
- Date of conference (month/day/year)
- Conference sponsor

**J.14 ENVIRONMENTAL (OCT 2000)**

In response, in part, to the requirements of the National Environmental Policy Act of 1969 (NEPA) and other related environmental statutes, the National Energy Technology Laboratory (NETL) requires the submission of various documents that assess the environmental aspects and projected impacts of all of its proposed actions. These documents may include the following: (1) Hazardous Substance Plan; (2) Hazardous Waste Report; (3) Environmental Compliance Plan; (4) Environmental Monitoring Plan; and (5) Environmental Status Reports.

The environmental information provided in these documents will enable NETL to fulfill its responsibilities under NEPA (additional information about the requirements of the National Environmental Policy Act can be found in the DOE NEPA Compliance Guide and 40 CFR 1021) and to monitor the proposer's compliance with other environmental regulations. The implementation of any task associated with a proposed action will be dependent upon DOE submitting and acquiring approval of necessary NEPA documentation. Therefore, to minimize the risk of project delays, it is imperative that these reports be submitted in a timely manner.

The information contained herein specifies the basic environmental requirements for this procurement action, but it is not to be interpreted as containing all necessary information for any given project. Likewise, certain aspects of the requirements may not be applicable. Accordingly, the level of information provided should be sufficient for DOE to assess the environmental implications of the proposed action.

**J.15 HAZARDOUS SUBSTANCE PLAN (MAR 1999)**

The Contractor shall submit a Hazardous Substance Plan not later than thirty (30) days after initial contract award. The Plan shall specifically identify each Hazardous Substance (as defined under 40 CFR 261, Subpart D, entitled Lists of Hazardous

Wastes) anticipated to be purchased, utilized or generated in the performance of this contract. For each such Hazardous Substance identified, the Plan shall specifically provide the following information:

- Description of Substance/Chemical
- EPA Hazardous Waste Number
- EPA Hazard Code
- Anticipated Quantity to be purchased, utilized or generated
- Anticipated Hazardous Waste Transporter
- Anticipated Hazardous Waste Disposal Facility Contractor and Location (City/Municipality, State)
- Anticipated Treatment Method

#### **J.16 HAZARDOUS WASTE REPORT (MAR 1999)**

The Contractor shall submit a Hazardous Waste Report at the completion of contract performance. The Report shall specifically identify each Hazardous Waste (as defined under 40 CFR 261, Subpart D, entitled Lists of Hazardous Wastes) actually utilized, or generated in the performance of this contract. For each such Hazardous Waste identified, the Report shall specifically provide the following information:

- Description of Substance/Chemical
- EPA Hazardous Waste Number
- EPA Hazard Code
- Actual Quantity Disposed
- Actual Hazardous Waste Transporter
- Actual Hazardous Waste Disposal Facility Contractor and Location (City/Municipality, State)
- Actual Disposal Date
- Actual Treatment Method

The Hazardous Waste Report is intended as a final reconciliation of anticipated versus actual Hazardous Substances purchased, utilized, or generated in the performance of this contract.

#### **J.17 TECHNICAL REPORTS (SEPT 2000)**

CAUTION: Technical reports SHALL NOT include Limited Rights Data (such as restricted, proprietary or business sensitive information). Limited Rights Data shall be submitted in a separate appendix to the technical report. This appendix SHALL NOT be submitted in an electronic format but rather submitted in ONE ORIGINAL AND THREE (3) PAPER COPIES along with the paper version of the sanitized technical report deliverable. The appendix shall be referenced in, but not incorporated into, the sanitized technical report deliverable under the contract. In accordance with FAR 52.227-14, Rights in Data-General, the appendix must be appropriately marked and identified.

Further, if this award authorizes the awardee under the provisions of The Energy Policy Act of 1992 to request protection from public disclosure for a limited period of time of certain information developed under this award, technical reports SHALL NOT contain such Protected EAct Information. Such information shall be submitted in a separate appendix to the technical report that is suitable for release after the agreed upon period of protection from public disclosure has expired. The appendix shall be referenced in, but not incorporated into, the sanitized technical report deliverable under the contract. In accordance with the clause titled "Obligations as to Protected Energy Policy Act (EAct) Information," the appendix must be appropriately marked and identified.

All TECHNICAL REPORTS submitted to the DOE MUST be accompanied by a completed and signed NETL F 510.1-5, addressing potentially patentable information.

#### **J.18 FINAL TECHNICAL REPORT (MAR 1999)**

The Final Report shall document and summarize all work performed during the contract period in a comprehensive manner. It shall also present findings and/or conclusions produced as a consequence of this work. This report shall not merely be a compilation of information contained in subsequent quarterly, or other technical reports, but shall present that information in an integrated fashion, and shall be augmented with findings and conclusions drawn from the research as a whole.

The contractor shall deliver a draft copy of the final report sixty (60) days before the completion of the period of performance. The Government shall be allowed thirty (30) days to review the draft copy and to notify the contractor, in writing, of approval or recommended changes. If the Government does not approve or recommend changes within thirty (30) days of receipt of the draft copy, the report shall be deemed approved. The approved final report is due on the contract completion date.

#### **J.19 TOPICAL REPORT (MAR 1999)**

These reports usually provide a comprehensive statement of the technical results of the work performed for a specific task or subtask of the Statement of Work (SOW), or detail significant new scientific or technical advances. If required, DOE shall review and approve the report outline prior to submission of the report.

#### **J.20 GUIDELINES FOR ORGANIZATION OF TECHNICAL REPORTS (DEC 1999)**

The following sections should be included (as appropriate) in technical reports in the sequence shown. Any section denoted by an asterisk is required in all technical reports.

TITLE PAGE\* - The Title Page of the report itself must contain the following information in the following sequence:

Report Title  
Type of Report (Quarterly, Semi-Annual, Annual, Topical, Final)  
Reporting Period Start Date  
Reporting Period End Date  
Principal Author(s)  
Date Report was Issued (Month [spelled out] and Year [4 digits])  
DOE Award Number (e.g., DE-AC26-99NT12345) and if appropriate, task number  
Name and Address of Submitting Organization (This section should also contain the name and address of significant contractors or subcontractors who participated in the production of the report.)

DISCLAIMER\* -- The Disclaimer must follow the title page, and must contain the following paragraph:

“This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.”

ABSTRACT\* - should be a brief, concise summary of the report.

TABLE OF CONTENTS\*

LIST(S) OF GRAPHICAL MATERIALS

## INTRODUCTION

**EXECUTIVE SUMMARY** - this should be a well organized summary that highlights the important accomplishments of the research during the reporting period. It should be no less than one page and no more than two pages in length, and should be single spaced. This summary must be more comprehensive than the traditional "abstract."

**EXPERIMENTAL\*** - this should describe, or reference all experimental methods being used for the research. It should also provide detail about materials and equipment being used. Standard methods can be referenced to the appropriate literature, where details can be obtained. Equipment should be described only if it is not standard, or if information is not available thru the literature or other reference publications.

**RESULTS AND DISCUSSION\*** - It is extremely important that this section includes enough relevant data, especially statistical data, to allow the project manager to justify the conclusions. With the relevant data, explain how the data was interpreted and how it relates to the original purpose of the research. Be concise in the discussion on how this research effort solved or contributed to solving the original problem.

**CONCLUSION\*** - The conclusion should not simply reiterate what was already included in the "Results and Discussion" section. It should, however, summarize what has already been presented, and include any logical implications of how the successes are relevant to technology development in the future. This is extremely important, since "relevancy" continues to be a criteria of the program.

**REFERENCES\***

**BIBLIOGRAPHY**

**LIST OF ACRONYMS AND ABBREVIATIONS**

**APPENDICES (IF NECESSARY)**

**Company Names and Logos** -- Except as indicated above, company names, logos, or similar material should not be incorporated into reports.

**Copyrighted Material** -- Copyrighted material should not be submitted as part of a report unless written authorization to use such material is received from the copyright owner and is submitted to DOE with the report.

**Measurement Units** -- All reports to be delivered under this instrument shall use the SI Metric System of Units as the primary units of measure. When reporting units in all reports, primary SI units shall be followed by their U.S. Customary Equivalents in parentheses ( ).

The contractor shall insert the text of this clause, including this paragraph, in all subcontracts under this award.

Note: SI is an abbreviation for "Le Systeme International d'Unites."

## **J.21 ELECTRONIC MEDIA STANDARD FOR PREPARATION OF TECHNICAL REPORTS (DEC 1999)**

### **FILE FORMAT**

Production of high-quality, electronic documents is dependent on the quality of the input that is provided. Thus, the contractor shall submit one good quality paper copy using either permanent or alkaline paper plus an electronic version of each technical report.

**ELECTRONIC REPORTS SHALL BE SUBMITTED IN THE ADOBE ACROBAT PORTABLE DOCUMENT FORMAT (PDF). ELECTRONIC REPORTS SUBMITTED IN A FORMAT OTHER THAN ADOBE WILL BE RETURNED AND THE REPORT CONSIDERED DELINQUENT.**

Each report shall be an integrated file that contains all text, tables, diagrams, photographs, schematics, graphs, and charts.

## **SUBMISSION FORMAT**

The electronic file(s) shall be submitted via diskette or CD-ROM. Diskettes or CD-ROMs must be labeled as follows:

DOE Award Number  
Type/Frequency of Report(s)  
Reporting Period (if applicable)  
Name of submitting organization  
Name, phone number and fax number of preparer

Diskettes -- Diskettes must be 3.5" double-sided, high-density (1.4 M Byte capacity). If file compression software is used to transmit a PDF file spanning more than one diskette, PKZIP from PKWare, Inc., is the required compression software. State the number of diskettes in the set (e.g., 1/3)

CD-ROM -- The electronic file(s) may be submitted on an ISO9660-format CD-ROM.

## **FILE NAMING**

In naming the electronic file, the contractor shall use the standard eight-character naming convention for the main file name, and the three character extension applicable to the software use, e.g., .pdf for Adobe.

For the main file name, the first five characters are the last five digits from the award number; e.g., for Award Number DE-AC26-97NT12345, the first five characters are 12345.

The next character represents the technical report and will always be designated as "R".

The remaining two characters indicate the chronological number of the particular type of report; e.g., Quarterly Technical Progress Reports for a 5-year award are numbered R01 through R20. Thus, the main file name for the sixth Quarterly Technical Progress Report under Award No. DE-AC26-99NT12345 would be 12345R06.PDF. If monthly, quarterly, annual, and a final technical report are required, the numbers would run from R01 through R86 (60 monthly reports, 20 quarterly reports, 5 annual reports, and 1 final report).

### **J.22 PROPERTY REPORTS (JAN 2000)**

The NETL Property Handbook entitled "Management of Government Property in the Possession of Contractors," contains forms, instructions, and suggested formats for submission of property reports. This handbook can be found at <http://www.netl.doe.gov/business/index.html>.

### **J.23 REPORT OF CONTRACTOR'S PROPERTY MANAGEMENT SYSTEM (JAN 2000)**

This report shall consist of the Contractor's comprehensive written property management system and is due within 6 months of the contract award date. It shall address the Contractor's written system for controlling, protecting, preserving and maintaining all Government property. The report format shall be consistent with Contractor's system and shall as a minimum enable comprehensive evaluation by the Government. (If not provided in your local format, see sample in the NETL Property Handbook).

**J.24 ANNUAL REPORT OF PROPERTY IN THE CUSTODY OF CONTRACTORS (NETL F 580.1-8) (JAN 2000)**

This report includes ALL Government-owned Contractor-acquired and Government-furnished property and materials for which the contractor is accountable to the Government. This report shall also include Government Property at subcontractor's plants and alternate locations. This report is submitted on NETL F 580.1-8 for the period ending September 30 and is due by October 15.

**J.25 REPORT OF TERMINATION OR COMPLETION INVENTORY (SF-1428, SF-120, and F580.1-7) (MAR 1999)**

This report submitted on the SF-1428, SF-120, and F580.1-7 is due immediately upon completion or termination of the contract. The contractor is required to perform and cause each subcontractor to perform a physical inventory, adequate for disposal purposes, of all Government property applicable to the contract.

**J.26 SUBCONTRACT REPORTING (FEB 2000)**

With the exception of a small business, reports listed below are required to be submitted electronically by the prime contractor for each contract containing a subcontracting plan. These electronic forms collect subcontract award data from prime contractors/subcontractors that: (a) hold one or more contracts over \$500,000 of the Government share amount (over \$1,000,000 for construction of a public facility); and (b) are required to report subcontracts awarded to Small Business (SB), Small Disadvantaged Business (SDB), and Women-Owned Small Business (WOSB) concerns under a subcontracting plan. Subcontract award data reported by prime contractors/subcontractors shall be limited to awards made to their immediate subcontractors.

**SUBCONTRACTING REPORT (SF294)**

Semi-annual Frequency  
Period End Dates: 3/31 and 9/30  
Due Dates: 4/30 and 10/30

Note: The first deliverable of this report is due whichever of the two dates is at least 60 calendar days after the award start date.

**SUMMARY SUBCONTRACTING REPORT (SF295)**

Annual Frequency  
Period End Date: 9/30  
Due Date: 10/30

Note: The first deliverable of this report is only required for the next period end date of 9/30, which is at least 60 calendar days after the award start date.

**SUBCONTRACT REPORTING SYSTEM (SRS)**

All subcontracting reports SF294's and SF295's must be submitted electronically. Access to the SRS can be made at <http://www1.pr.doe.gov/srs/>. All contractors must register with the Headquarters SRS Systems Manager and use it to submit the required reports. When registering, the contractor must provide a valid DUNS number. When registration is approved, the contractor may use the system simply by logging in with his or her user name and password and transmit SF-294 and 295 data to the contracting office that requires the report. After review by the contracting office, the data will be forwarded via the Internet to DOE Headquarters. A comprehensive manual for the system may be found at <http://www1.pr.doe.gov/srs.wpd> (WordPerfect Version) or <http://www1.pr.doe.gov/srs.doc> (Word Version).

**J.27    ATTACHMENT C -- GOVERNMENT PROPERTY/CONTRACTOR ACQUIRED (MAR 1999)**

[ ]



**J.28    ATTACHMENT D - SMALL BUSINESS SUBCONTRACTING PLAN (NOV 2000)**

In accordance with FAR 52.219-9 and DEAR 952.226-72, the offeror, upon request by the Contracting Officer, shall submit and negotiate a subcontracting plan, where applicable, that separately addresses subcontracting with small business, veteran-owned small business, HUBZone small business concerns, small disadvantaged business, and women-owned small business concerns.

A sample small business subcontracting plan can be found on the NETL Website at: <http://www.netl.doe.gov/business/forms/forms.html>.

## **J.29    ATTACHMENT E - ENVIRONMENTAL QUESTIONNAIRE**

### **I.    BACKGROUND**

The Department of Energy's (DOE) National Environmental Policy Act (NEPA) Implementing Procedures (10 CFR 1021) require careful consideration of the potential environmental consequences of all proposed actions during the early planning stages. DOE must determine at the earliest possible time whether such actions require either an Environmental Assessment or an Environmental Impact Statement, or whether they qualify for Categorical Exclusion. To comply with these requirements, an Environmental Questionnaire must be completed for each proposed action to provide DOE with the information necessary to determine the appropriate level of NEPA review.

### **II.    INSTRUCTIONS**

Separate copies of this Environmental Questionnaire should be completed by the principal offeror and each proposed subcontractor. In addition, if the proposed project includes activities at different locations, an independent questionnaire should be prepared for each location. Supporting information can be provided as attachments.

In completing this questionnaire, the proposer is requested to provide specific quantities regarding air emissions, wastewater discharges, solid wastes, etc., to facilitate the necessary review. In addition, the proposer should identify the exact location of the project and specifically describe the activities that would occur at that location.

To expedite completion of this questionnaire, diskette copies in WordPerfect 6.1 are available upon request. Questions regarding the type of information requested or the approach to preparing responses should be referred to Lloyd Lorenzi, U.S. Department of Energy, National Energy Technology Laboratory, by phone (412) 892-6159, fax (412) 892-6127, or E-mail (lorenzi@netl.doe.gov).

### **III.    QUESTIONNAIRE**

#### **A.    PROJECT SUMMARY**

1.    Solicitation Number: \_\_\_\_\_
2.    Proposer & all Proposed Subcontractors: \_\_\_\_\_  
\_\_\_\_\_
3.    Principal Investigator: \_\_\_\_\_  
      Telephone Number: \_\_\_\_\_
4.    Project Title: \_\_\_\_\_
5.    Duration: \_\_\_\_\_
6.    Location (city/township, county, state): \_\_\_\_\_  
\_\_\_\_\_
7.    Indicate the type or scale of project:
  - a.    ☐ Computer Modeling
  - b.    ☐ Library/Literature Search
  - c.    ☐ Paper Study
  - d.    ☐ Workshop/Conference
  - e.    ☐ Laboratory (Batch) Research
  - f.    ☐ Bench-scale Research
  - g.    ☐ Pilot- or Proof-of-Concept-Scale Research
  - h.    ☐ Pilot Plant Construction/Operation
  - i.    ☐ Full-Scale Demonstration
  - j.    ☐ Other (please describe): \_\_\_\_\_
8.    Indicate the size of the proposed project and the primary material processed (e.g., 200 tph of coal).

_____ tph (of _____ )	_____ MM Btu/hr
_____ scfm (of _____ )	_____ MW <input type="checkbox"/> electric <input type="checkbox"/> thermal
_____ acfm (of _____ )	Other: _____

9a. Summarize the proposed work. List all activities or tasks planned at the location covered by this Environmental Questionnaire.

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9b. Characterize the work site at this location (check all that apply).

☐ Existing Building (Indoors)

☐ Developed Site

☐ Undeveloped Site

10. List all other locations where work would be performed. (**Note: Submit a separate Environmental Questionnaire for each location.**)

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11. Describe the objectives of the proposed project.

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12. Identify the planned number of tests, the frequency of testing (e.g., tests per week), and the duration of tests by type (e.g., laboratory tests, pilot unit runs, etc.).

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13. Identify all materials that would be used and produced by the project (materials can be grouped by category) and estimate their total quantities over the entire duration of the proposed project.

Materials Used (total quantity)			Materials Produced (total quantity)		
<input type="checkbox"/>	coal	( )	<input type="checkbox"/>	wastewater	( )
<input type="checkbox"/>	natural gas	( )	<input type="checkbox"/>	air emissions	( )
<input type="checkbox"/>	oil	( )	<input type="checkbox"/>	solid waste	( )
<input type="checkbox"/>	electricity	( )	<input type="checkbox"/>	hazardous waste	( )
<input type="checkbox"/>	water	( )	<input type="checkbox"/>	salable by-	
<input type="checkbox"/>	air	( )		list and note	
<input type="checkbox"/>	organic solvents	( )			
<input type="checkbox"/>	others -- list and note quantity:		<input type="checkbox"/>	others -- list and note quantity:	
<input type="checkbox"/>	None		<input type="checkbox"/>	None	

## B. PROPOSED PROJECT AND ITS ALTERNATIVES

1. List all alternative approaches considered to achieve the objectives described in A.11 and discuss the anticipated environmental effects of each. (Place the selected approach at the top of the list.)

2. Identify the environmental consequences of not implementing this project (e.g., emission increase).

### C. PROJECT LOCATION

1. Provide a brief description of the project location (physical location, surrounding area, adjacent structures).

2. Attach a site plan or topographic map of the area that would be affected by the project and highlight (or otherwise identify) the specific location where the project would be performed.

### **CERTIFICATION BY PROPOSER**

I hereby certify that the information provided herein is current, accurate, and complete as of the date shown immediately below.

DATE: \_\_\_\_\_  
month      day      year

SIGNATURE: \_\_\_\_\_

TYPED NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

ORGANIZATION: \_\_\_\_\_

**SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR QUOTERS**

**K.1 52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS. (APR 1991)**

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989 -

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

**K.2 52.204-3 TAXPAYER IDENTIFICATION. (OCT 1998)**

(a) *Definitions.*

“Common parent,” as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

“Taxpayer Identification Number (TIN),” as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the

payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) *Taxpayer Identification Number (TIN).*

☐ TIN: \_\_\_\_\_.

☐ TIN has been applied for.

☐ TIN is not required because:

☐ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

☐ Offeror is an agency or instrumentality of a foreign government;

☐ Offeror is an agency or instrumentality of the Federal Government.

(e) *Type of organization.*

☐ Sole proprietorship;

☐ Partnership;

☐ Corporate entity (not tax-exempt);

☐ Corporate entity (tax-exempt);

☐ Government entity (Federal, State, or local);

☐ Foreign government;

☐ International organization per 26 CFR 1.6049-4;

☐ Other \_\_\_\_\_.

(f) *Common parent.*

☐ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

☐ Name and TIN of common parent:

Name \_\_\_\_\_

TIN \_\_\_\_\_

**K.3 52.204-5 WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS). (MAY 1999)**

(a) *Definition.* "Women-owned business concern," as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) *Representation.* [Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, *Small Business Program Representations*, of this solicitation.] The offeror represents that it \* is a women-owned business concern.

**K.4 52.209-5 CERTIFICATION REGARDING DEBARMENT , SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (MAR 1996)**

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that -

(i) The Offeror and/or any of its Principals -

(A) Are ☐ are not ☐ presently debarred, suspended, proposed for debarment , or declared ineligible for the award of contracts by any Federal agency;

(B) Have ☐ have not ☐ , within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are ☐ are not ☐ presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has ☐ has not ☐ , within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

**K.5 52.215-6 PLACE OF PERFORMANCE. (OCT 1997)**

(a) The offeror or respondent, in the performance of any contract resulting from this solicitation, [ ] intends, [ ] does not intend [*check applicable block*] to use one or more plants or facilities located at a different address from the address of the offeror or respondent as indicated in this proposal or response to request for information.

(b) If the offeror or respondent checks “intends” in paragraph (a) of this provision, it shall insert in the following spaces the required information:

Place of Performance (Street Address, City, State, County, Zip Code)	Name and Address of Owner and Operator of the Plant or Facility if Other than Offeror or Respondent
--	--

_____	_____
_____	_____

**K.6 52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS. (MAR 2001) ALTERNATE I (OCT 2000)**

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 541710.

(2) The small business size standard is 500 employees.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) *Representations.* (1) The offeror represents as part of its offer that it ☐ is, ☐ is not a small business concern.

(2) [*Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.*] The offeror represents, for general statistical purposes, that it ☐ is, ☐ is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) [*Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.*] The offeror represents as part of its offer that it ☐ is, ☐ is not a women-owned small business concern.

(4) [*Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.*] The offeror represents as part of its offer that it ☐ is, ☐ is not a veteran-owned small business concern.

(5) [*Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.*] The offeror represents as part of its offer that it ☐ is, ☐ is not a service-disabled veteran-owned small business concern.

(6) [*Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision.*] The offeror represents, as part of its offer, that -

(i) It ☐ is, ☐ is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office of ownership, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR Part 126; and

(ii) It ☐ is, ☐ is not a joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. [*The offeror shall enter*



*the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: \_\_\_\_\_.*] Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(c) *Definitions.* As used in this provision -

“Service-disabled veteran-owned small business concern” -

(1) Means a small business concern -

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

“Small business concern” means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (a) of this provision.

“Veteran-owned small business concern” means a small business concern -

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

“Women-owned small business concern” means a small business concern -

(1) That is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) *Notice.* (1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall -

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

**K.7 52.219-22 SMALL DISADVANTAGED BUSINESS STATUS. (OCT 1999)**

(a) *General.* This provision is used to assess an offeror's small disadvantaged business status for the purpose of obtaining a benefit on this solicitation. Status as a small business and status as a small disadvantaged business for general statistical purposes is covered by the provision at FAR 52.219-1, Small Business Program Representation.

(b) *Representations.* (1) *General.* The offeror represents, as part of its offer, that it is a small business under the size standard applicable to this acquisition; and either -

☐ (i) It has received certification by the Small Business Administration as a small disadvantaged business concern consistent with 13 CFR 124, Subpart B; and

(A) No material change in disadvantaged ownership and control has occurred since its certification;

(B) Where the concern is owned by one or more disadvantaged individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(C) It is identified, on the date of its representation, as a certified small disadvantaged business concern in the database maintained by the Small Business Administration (PRO-Net); or

☐ (ii) It has submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(2) ☐ *For Joint Ventures.* The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements at 13 CFR 124.1002(f) and that the representation in paragraph (b)(1) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. [*The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture:\_\_\_\_\_.*]

(c) *Penalties and Remedies.* Anyone who misrepresents any aspects of the disadvantaged status of a concern for the purposes of securing a contract or subcontract shall -

(1) Be punished by imposition of a fine, imprisonment, or both;

(2) Be subject to administrative remedies, including suspension and debarment; and

(3) Be ineligible for participation in programs conducted under the authority of the Small Business Act.

**K.8 52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS. (FEB 1999)**

The offeror represents that -

(a) It ☐ has, ☐ has not participated in a previous contract or subcontract subject the Equal Opportunity clause of this solicitation;

(b) It ☐ has, ☐ has not filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

**K.9 52.222-25 AFFIRMATIVE ACTION COMPLIANCE. (APR 1984)**

The offeror represents that -

- (a) It ☐ has developed and has on file, ☐ has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2); or
- (b) It ☐ has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

**K.10 52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING. (OCT 2000)**

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that -

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: *[Check each block that is applicable.]*

- ☐ (i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);
- ☐ (ii) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);
- ☐ (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);
- ☐ (iv) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or
- ☐ (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

**K.11 52.226-2 HISTORICALLY BLACK COLLEGE OR UNIVERSITY AND MINORITY INSTITUTION REPRESENTATION. (MAR 2001)**

(a) Definitions. As used in this provision--

“Historically black college or university” means an institution determined by the Secretary of Education to meet the requirements of 34 CFR 608.2. For the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, the term also includes any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

“Minority institution” means an institution of higher education meeting the requirements of Section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1067k, including a Hispanic-serving institution of higher education, as defined in Section 316(b)(1) of the Act (20 U.S.C. 1101a)).

(b) Representation. The offeror represents that it--

[ ] is [ ] is not a historically black college or university;

[ ] is [ ] is not a minority institution.

**K.12 52.227-6 ROYALTY INFORMATION. (APR 1984)**

(a) *Cost or charges for royalties.* When the response to this solicitation contains costs or charges for royalties totaling more than \$250, the following information shall be included in the response relating to each separate item of royalty or license fee:

(1) Name and address of licensor.

(2) Date of license agreement.

(3) Patent numbers, patent application serial numbers, or other basis on which the royalty is payable.

(4) Brief description, including any part or model numbers of each contract item or component on which the royalty is payable.

(5) Percentage or dollar rate of royalty per unit.

(6) Unit price of contract item.

(7) Number of units.

(8) Total dollar amount of royalties.

(b) *Copies of current licenses.* In addition, if specifically requested by the Contracting Officer before execution of the contract, the offeror shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents.

**K.13 52.227-7 PATENTS - NOTICE OF GOVERNMENT LICENSEE. (APR 1984)**

The Government is obligated to pay a royalty applicable to the proposed acquisition because of a license agreement between the Government and the patent owner. The patent number is [Contracting Officer fill in], and the royalty rate is [Contracting Officer fill in]. If the offeror is the owner of, or a licensee under, the patent, indicate below:

☐ Owner ☐ Licensee

If an offeror does not indicate that it is the owner or a licensee of the patent, its offer will be evaluated by adding thereto an amount equal to the royalty.

**K.14 52.227-15 REPRESENTATION OF LIMITED RIGHTS DATA AND RESTRICTED COMPUTER SOFTWARE. (MAY 1999)**

(a) This solicitation sets forth the work to be performed if a contract award results, and the Government's known delivery requirements for data (as defined in FAR 27.401). Any resulting contract may also provide the Government the option to order additional data under the Additional Data Requirements clause at 52.227-16 of the FAR, if included in the contract. Any data delivered under the resulting contract will be subject to the Rights in Data - General clause at 52.227-14 that is to be included in this contract. Under the latter clause, a Contractor may withhold from delivery data that qualify as limited rights data or restricted computer software, and deliver form, fit, and function data in lieu thereof. The latter clause also may be used with its Alternates II and/or III to

obtain delivery of limited rights data or restricted computer software, marked with limited rights or restricted rights notices, as appropriate. In addition, use of Alternate V with this latter clause provides the Government the right to inspect such data at the Contractor's facility.

(b) As an aid in determining the Government's need to include Alternate II or Alternate III in the clause at 52.227-14, Rights in Data - General, the offeror shall complete paragraph (c) of this provision to either state that none of the data qualify as limited rights data or restricted computer software, or identify, to the extent feasible, which of the data qualifies as limited rights data or restricted computer software. Any identification of limited rights data or restricted computer software in the offeror's response is not determinative of the status of such data should a contract be awarded to the offeror.

(c) The offeror has reviewed the requirements for the delivery of data or software and states [*offeror check appropriate block*] -

- ☐ None of the data proposed for fulfilling such requirements qualifies as limited rights data or restricted computer software.
- ☐ Data proposed for fulfilling such requirements qualify as limited rights data or restricted computer software and are identified as follows:

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Note: "Limited rights data" and "Restricted computer software" are defined in the contract clause entitled "Rights in Data - General."

**K.15 52.230-1 COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION. (JUN 2000)**

Note: This notice does not apply to small businesses or foreign governments. This notice is in three parts, identified by Roman numerals I through III.

Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract.

If the offeror is an educational institution, Part II does not apply unless the contemplated contract will be subject to full or modified CAS coverage pursuant to 48 CFR 9903.201-2(c)(5) or 9903.201-2(c)(6), respectively.

**I. Disclosure Statement - Cost Accounting Practices and Certification**

(a) Any contract in excess of \$500,000 resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR Chapter 99), except for those contracts which are exempt as specified in 48 CFR 9903.201-1.

(b) Any offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of 48 CFR Chapter 99 must, as a condition of contracting, submit a Disclosure Statement as required by 48 CFR 9903.202. When required, the Disclosure Statement must be submitted as a part of the offeror's proposal under this solicitation unless the offeror has already submitted a Disclosure Statement disclosing the practices used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.

Caution: In the absence of specific regulations or agreement, a practice disclosed in a Disclosure Statement shall not, by virtue of such disclosure, be deemed to be a proper, approved, or agreed-to practice for pricing proposals or accumulating and reporting contract performance cost data.

(c) Check the appropriate box below:

☐ (1) *Certificate of Concurrent Submission of Disclosure Statement.* The offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows:

(i) Original and one copy to the cognizant Administrative Contracting Officer (ACO) or cognizant Federal agency official authorized to act in that capacity (Federal official), as applicable; and

(ii) One copy to the cognizant Federal auditor.

(Disclosure must be on Form No. CASB DS-1 or CASB DS-2, as applicable. Forms may be obtained from the cognizant ACO or Federal official and/or from the loose-leaf version of the Federal Acquisition Regulation.)

Date of Disclosure Statement: [Name and Address of Cognizant ACO or Federal Official Where Filed:]

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the Disclosure Statement.

☐ (2) *Certificate of Previously Submitted Disclosure Statement.* The offeror hereby certifies that the required Disclosure Statement was filed as follows:

Date of Disclosure Statement: ☐

Name and Address of Cognizant ACO or Federal Official Where Filed: ☐

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.

☐ (3) *Certificate of Monetary Exemption.* The offeror hereby certifies that the offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling \$50 million or more in the cost accounting period immediately preceding the period in which this proposal was submitted. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

☐ (4) *Certificate of Interim Exemption.* The offeror hereby certifies that (i) the offeror first exceeded the monetary exemption for disclosure, as defined in (3) of this subsection, in the cost accounting period immediately preceding the period in which this offer was submitted and (ii) in accordance with 48 CFR 9903.202-1, the offeror is not yet required to submit a Disclosure Statement. The offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under subparagraph (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

Caution: Offerors currently required to disclose because they were awarded a CAS-covered prime contract or subcontract of \$50 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

## II. Cost Accounting Standards - Eligibility for Modified Contract Coverage

If the offeror is eligible to use the modified provisions of 48 CFR 9903.201-2(b) and elects to do so, the offeror shall indicate by checking the box below. Checking the box below shall mean that the resultant contract is subject to the Disclosure and Consistency of Cost Accounting Practices clause in lieu of the Cost Accounting Standards clause.

☐ The offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 48 CFR 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than \$50 million in awards of CAS-covered prime contracts and subcontracts. The

offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

Caution: An offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of \$50 million or more or if, during its current cost accounting period, the offeror has been awarded a single CAS-covered prime contract or subcontract of \$50 million or more.

### III. Additional Cost Accounting Standards Applicable to Existing Contracts

The offeror shall indicate below whether award of the contemplated contract would, in accordance with subparagraph (a)(3) of the Cost Accounting Standards clause, require a change in established cost accounting practices affecting existing contracts and subcontracts.

☐ yes ☐ no

#### **K.16 COMPLIANCE WITH VETERANS EMPLOYMENT REPORTING REQUIREMENTS (JUNE 1999)**

(a) The Offeror represents that, if it is subject to the reporting requirements of 38 U.S.C. 4212(d) (i.e. the VETS-100 report required by the Federal Acquisition Regulation clause 52.222-37, Employment Reports on Disabled Veterans and Veterans of the Vietnam Era), it has ☐, has not ☐ submitted the most recent report required by 38 U.S.C. 4212(d).

(b) An Offeror who checks "has not" may not be awarded a contract until the required reports are filed. (31 U.S.C. 1354)

#### **K.17 SIGNATURE/CERTIFICATION (MAR 1999)**

By signing below, the offeror certifies, under penalty of law, that the representations and certifications are accurate, current, and complete. The offeror further certifies that it will notify the Contracting Officer of any changes to these representations and certifications. The representations and certification made by the offeror, as contained herein, concern matters within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent representation or certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

\_\_\_\_\_  
Signature of the Officer or Employee  
Responsible for the Offer

\_\_\_\_\_  
Date of Execution

\_\_\_\_\_  
Typed Name and Title of the Officer or Employee  
Responsible for the Offer

Name and Address of Organization:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Solicitation Number: \_\_\_\_\_





## **SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS OR QUOTERS**

### **L.1 CONSECUTIVE NUMBERING (JAN 1999)**

Due to automated procedures employed in formulating this document, clauses and provisions contained within it may not always be consecutively numbered.

### **L.2 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE. (FEB 1998)**

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far/index.html>

<http://www.pr.doe.gov/dear.html>

<http://www.professionals.pr.doe.gov/ma5/MA-5Web.nsf/Procurement/Acquisition+Regulation?OpenDocument>

### **L.3 CONTENT OF RESULTING CONTRACT (NOV 1998)**

Any contract awarded as a result of this PRDA will contain PART I - The Schedule, PART II - Contract Clauses, and PART III, Section J - List of Documents, Exhibits and Other Attachments (excluding those attachments including in this PRDA relating to submission of proposals). Blank areas appearing in these sections, indicated by "[ ]" will be completed prior to contract award.

Offerors should carefully review the information contained therein, and, as appropriate, state any proposed exceptions/deviations per FAR 52.215-1.

### **L.4 PARTICIPATION BY FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS (FFRDC) AND DEPARTMENT OF ENERGY (DOE) MANAGEMENT AND OPERATIONS (M&O) CONTRACTORS (DEC 2000)**

#### **A. PROPOSED USE OF A DOE M&O CONTRACTOR**

Proposals submitted by, or substantially relying upon the technical expertise of, (1) another Federal agency; (2) a Federally Funded Research and Development Center (FFRDC) sponsored by a Federal agency; or (3) a Department of Energy (DOE) Management and Operating (M&O) contractor are not desired, will not be evaluated, and will not be eligible for an award under this solicitation. Offerors are encouraged to maximize the use of private sector organizations in the performance of the proposed effort. However, a proposal that includes performance by a FFRDC or DOE M&O contractor(s) may be considered for award, provided that: (1) the proposed use of any such entities is specifically authorized by the cognizant agency for the FFRDC or DOE for DOE M&O contractors, in accordance with the procedures established for the FFRDC or the DOE M&O contractor; (2) the work is not otherwise available from the private sector; and (3) the estimated aggregate cost of the FFRDC or M&O contractor(s) work does not exceed 25 percent of the total estimated project cost. DOE reserves the right to fund the work through a DOE field work proposal or an interagency agreement. If so, DOE will not reimburse the prime contractor or higher-tiered subcontractor, for indirect costs (e.g., overhead and/or G&A) allocated to the FFRDC or M&O subcontract costs.

#### **B. PROPOSAL SUBMISSION REQUIREMENTS**

In addition to the proposal information to be provided by the offeror as set forth in other parts of this Section L, the following requirements apply:

1. Justification.

The offeror shall submit a letter with its proposal (Volume I) which states that to the best of its knowledge, the work requested will not place the FFRDC or the DOE M&O contractor(s) in direct competition with the domestic private sector, and that the proposed scope of work cannot be performed by any private entity.

2. Work Scope.

The proposal must provide a detailed scope of work which clearly identifies that portion of the proposed effort to be performed by the offeror and a separate scope of work for the effort to be performed by the FFRDC or DOE M&O contractor(s). This detailed scope of work shall be provided as an appendix to the Volume II, Technical Proposal.

3. Cost Information.

The offeror shall provide cost information for that portion of the proposed work scope (see 2, above) to be performed by a FFRDC or DOE M&O contractor(s). The cost information shall be furnished in the same format and level of detail as prescribed for subcontractors. If a contractor uses an FFRDC or DOE M&O contractor to perform a portion of the work, the contractor's cost sharing [requirement] shall be based on the total cost of the project, including both the contractor's and the FFRDC or DOE M&O's portions of the effort. The estimated cost of the effort shall be clearly identified in the Volume III, Cost Proposal.

4. Authorization from the DOE Contracting Officer

The applicant must submit a document from the DOE Contracting Officer or authorized designee stating that the DOE M&O contractor is authorized to participate in the proposed effort.

#### **L.5 RESPONSIBLE PROSPECTIVE CONTRACTORS (JUNE 1999)**

All responsible individuals, corporations, non-profit organizations, educational institutions, and state or local governments may submit proposals for consideration. The general and additional minimum standards for responsible prospective Contractors set forth at FAR 9.1 apply.

DOE may conduct preaward surveys in accordance with FAR 9.106 and may solicit from available sources, relevant information concerning the offeror's record of past performance, and use such information in making determinations of prospective offeror responsibility.

#### **L.6 TIME, DATE AND PLACE PROPOSALS ARE DUE -- IIPS (JULY 2001)**

All proposals shall be submitted electronically through DOE's Industry Interactive Procurement System (IIPS) located at <http://e-center.doe.gov>.

Offerors must register in IIPS in order to submit a proposal. Only registered users will have the capability to transmit their proposals in a responsive manner. Offerors are strongly encouraged to register with IIPS as soon as possible prior to the proposal deadline. Questions regarding registration or submission of proposals through IIPS must be e-mailed to Laura Freeman at [freeman@netl.doe.gov](mailto:freeman@netl.doe.gov) or by calling the HELP Desk at 1-800-683-0751. An IIPS "User Guide for Contractors" can be obtained by going to the IIPS Homepage at <http://e-center.doe.gov> and clicking on the "HELP" button.

The only acceptable mode of proposal transmission is through IIPS. Proposals submitted through the U.S. Postal Service, facsimile, telegraphically, courier companies, or hand-delivered hard copies will be considered non-responsive.

**ALL PROPOSALS MUST HAVE AN IIPS TRANSMISSION TIME STAMP OF NOT LATER THAN 8:00pm EASTERN STANDARD TIME ON DECEMBER 17, 2001.**

Offerors are advised to begin transmission 24 hours in advance of the deadline in order to prevent any transmission difficulties.

#### **L.7 LATE PROPOSALS, AMENDMENTS AND WITHDRAWALS OF PROPOSALS -- IIPS (JAN 2001)**

A proposal or amendment of a proposal shall be timely if it is transmitted through IIPS, and the date/time of the transmission indicated by IIPS is on or before the closing date(s) indicated above.

Proposals or amendments of proposals may be withdrawn by written notice by an authorized representative to the Contract Specialist via E-mail or by contacting the IIPS HELP Desk. A second proposal or amendment may then be submitted. The second or subsequent proposal must be submitted before the closing date to be considered.

In the event that two or more proposals are received for the same project with the same file name, the proposal with the latest transmission time stamp will be considered for review. Therefore, it is important that you not merely make page changes and resubmit portions of the proposal that are amended. A complete amended proposal must be sent. Contact the IIPS HELP Desk for assistance.

#### **L.9 INTENTION TO PROPOSE (MAR 1999)**

To enable us to anticipate the number of submissions to be evaluated, please complete the information in the Intention to Propose form (Enclosure A1) and return to the addressee shown via mail, facsimile or e-mail, by the earliest practical date.

#### **L.10 NUMBER OF AWARDS (NOV 1997)**

It is anticipated that there will be multiple award(s) resulting from this solicitation. However, the Government reserves the right to make any number of awards, or no award, if considered to be in the Government's best interest to do so.

#### **L.11 52.215-1 INSTRUCTIONS TO OFFERORS - COMPETITIVE ACQUISITION. (MAR 2001)**

(a) *Definitions.* As used in this provision -

“Discussions” are negotiations that occur after establishment of the competitive range that may, at the Contracting Officer's discretion, result in the offeror being allowed to revise its proposal.

“In writing, writing, or written” means any worded or numbered expression that can be read, reproduced, and later communicated, and includes electronically transmitted and stored information.

“Proposal modification” is a change made to a proposal before the solicitation's closing date and time, or made in response to an amendment, or made to correct a mistake at any time before award.

“Proposal revision” is a change to a proposal made after the solicitation closing date, at the request of or as allowed by a Contracting Officer as the result of negotiations.

“Time,” if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays. However, if the last day falls on a Saturday, Sunday, or legal holiday, then the period shall include the next working day.

(b) *Amendments to solicitations.* If this solicitation is amended, all terms and conditions that are not amended remain unchanged. Offerors shall acknowledge receipt of any amendment to this solicitation by the date and time specified in the amendment(s).

(c) *Submission, modification, revision, and withdrawal of proposals.* (1) Unless other methods (*e.g.*, electronic commerce or facsimile) are permitted in the solicitation, proposals and modifications to proposals shall be submitted in paper media in sealed envelopes or packages (i) addressed to the office specified in the solicitation, and (ii) showing the time and date specified for receipt, the solicitation number, and the name and address of the offeror. Offerors using commercial carriers should ensure that the proposal is marked on the outermost wrapper with the information in paragraphs (c)(1)(i) and (c)(1)(ii) of this provision.

(2) The first page of the proposal must show -

(i) The solicitation number;

(ii) The name, address, and telephone and facsimile numbers of the offeror (and electronic address if available);

(iii) A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item;

(iv) Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the offeror's behalf with the Government in connection with this solicitation; and

(v) Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

(3) *Submission, modification, revision, and withdrawal of proposals.* (i) Offerors are responsible for submitting proposals, and any modifications or revisions, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that proposal or revision is due.

(ii)(A) Any proposal, modification, or revision received at the Government office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and -

(1) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or

(2) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

(3) It is the only proposal received.

(B) However, a late modification of an otherwise successful proposal that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(iii) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(iv) If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(v) Proposals may be withdrawn by written notice received at any time before award. Oral proposals in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award, subject to the conditions specified in the provision at 52.215-5, Facsimile Proposals. Proposals may be withdrawn in person by an offeror or an authorized representative,

if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

(4) Unless otherwise specified in the solicitation, the offeror may propose to provide any item or combination of items.

(5) Offerors shall submit proposals in response to this solicitation in English, unless otherwise permitted by the solicitation, and in U.S. dollars, unless the provision at FAR 52.225-17, Evaluation of Foreign Currency Offers, is included in the solicitation.

(6) Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

(7) Offerors may submit revised proposals only if requested or allowed by the Contracting Officer.

(8) Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.

(d) *Offer expiration date.* Proposals in response to this solicitation will be valid for the number of days specified on the solicitation cover sheet (unless a different period is proposed by the offeror).

(e) *Restriction on disclosure and use of data.* Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall -

(1) Mark the title page with the following legend:

This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed - in whole or in part - for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of - or in connection with - the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [*insert numbers or other identification of sheets*]; and

(2) Mark each sheet of data it wishes to restrict with the following legend:

Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.

(f) *Contract award.* (1) The Government intends to award a contract or contracts resulting from this solicitation to the responsible offeror(s) whose proposal(s) represents the best value after evaluation in accordance with the factors and subfactors in the solicitation.

(2) The Government may reject any or all proposals if such action is in the Government's interest.

(3) The Government may waive informalities and minor irregularities in proposals received.

(4) The Government intends to evaluate proposals and award a contract without discussions with offerors (except clarifications as described in FAR 15.306(a)). Therefore, the offeror's initial proposal should contain the offeror's best terms from a cost or price and technical standpoint. The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary. If the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

- (5) The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the offeror specifies otherwise in the proposal.
- (6) The Government reserves the right to make multiple awards if, after considering the additional administrative costs, it is in the Government's best interest to do so.
- (7) Exchanges with offerors after receipt of a proposal do not constitute a rejection or counteroffer by the Government.
- (8) The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or subline items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.
- (9) If a cost realism analysis is performed, cost realism may be considered by the source selection authority in evaluating performance or schedule risk.
- (10) A written award or acceptance of proposal mailed or otherwise furnished to the successful offeror within the time specified in the proposal shall result in a binding contract without further action by either party.
- (11) The Government may disclose the following information in postaward debriefings to other offerors:
- (i) The overall evaluated cost or price and technical rating of the successful offeror;
  - (ii) The overall ranking of all offerors, when any ranking was developed by the agency during source selection;
  - (iii) A summary of the rationale for award; and
  - (iv) For acquisitions of commercial items, the make and model of the item to be delivered by the successful offeror.

**L.12 52.216-1 TYPE OF CONTRACT. (APR 1984)**

The Government contemplates award of cost reimbursement fixed-fee contracts resulting from this solicitation.

**L.13 FALSE STATEMENTS (NOV 1997)**

Proposals must set forth full, accurate, and complete information as required by this solicitation (including attachments). The penalty for making false statements in proposals is prescribed in 18 U.S.C. 1001.

**L.14 EXPENSES RELATED TO OFFEROR SUBMISSIONS (FEB 1998)**

This solicitation does not commit the Government to pay any costs incurred in the submission of any proposal or in making necessary studies or designs for the preparation thereof or to acquire or contract for any services.

**L.15 ALTERNATE PROPOSAL INFORMATION - NONE (NOV 1997)**

Alternate proposals are not solicited, are not desired, and shall not be evaluated.

**L.16 AMENDMENT OF THE SOLICITATION -- IIPS (JULY 2001)**

The only method by which any term of this solicitation may be modified is by an express, formal amendment to the solicitation generated by the issuing office. No other communication made at any scheduled preproposal conference or subsequent discussions, whether oral or in writing, will modify or supersede the terms of this solicitation. All amendments to this

solicitation will be posted on the IIPS Homepage. Offerors are encouraged to periodically check IIPS to ascertain the status of any amendments as hard copies will not be distributed. Receipt of an amendment to a solicitation by an offeror must be acknowledged and received prior to the hour and date specified for receipt of offers.

**L.17 CLASSIFIED MATERIAL - NONE (NOV 1997)**

Performance under the proposed contract is not anticipated to involve access to classified material.

**L.18 PREPROPOSAL CONFERENCE IS NOT PLANNED (NOV 1997)**

A preproposal conference for this solicitation is not contemplated.

**L.19 AN EQUAL RIGHTS NOTE (NOV 1997)**

Wherever, in the solicitation or contract "man," "men," or their related pronouns may appear, either as words or as parts of words (and other than with obvious reference to named male individuals), they have been used for literary purposes and are meant in their generic sense (i.e., to include all humankind - both female and male sexes).

**L.20 SMALL BUSINESS SIZE STANDARDS AND SET-ASIDE INFORMATION (UNRESTRICTED) (MAY 1999)**

This acquisition is unrestricted and contains no set-aside provisions.

**L.21 IIPS PROPOSAL PREPARATION INSTRUCTIONS -- GENERAL (NOV 2000)**

Proposals are expected to conform to the solicitation provision entitled "Instructions to Offers - Competitive Acquisition" and be prepared in accordance with this section. Bidders/Offerors are advised that the submission of your proposal in an electronic format is required utilizing the Industry Interactive Procurement System (IIPS) through the Internet at <http://e-center.doe.gov/>.

IIPS provides the medium for disseminating solicitations, receiving proposals, and evaluating proposals in a paperless environment. Individuals who have the authority to enter their company into a legally binding contract and intend to submit proposals via the IIPS system must register and receive confirmation that they registered prior to being able to submit an application on the IIPS System. An IIPS "User Guide for Contractors" can be obtained by going to the IIPS Homepage at <http://e-center.doe.gov> and then clicking on the "Help" button. Questions regarding the operation of IIPS may be e-mailed to the IIPS Help Desk at [IIPS\\_HelpDesk@e-center.doe.gov](mailto:IIPS_HelpDesk@e-center.doe.gov) or call the Help Desk at (800) 683-0751.

To aid in evaluation, proposals shall be clearly and concisely written as well as being neat, indexed (cross-indexed as appropriate), and logically assembled. All pages of each part shall be appropriately numbered, and identified with the name of the offeror, the date, and the solicitation number to the extent practicable. Proposal files are to be formatted in one of the following applications: **Adobe Acrobat PDF or Word**. File name extensions should be appropriate to the file type as **".pdf"** or **".doc"**.

**OVERALL ARRANGEMENT OF PROPOSAL**

The overall proposal shall consist of 3 volumes, individually entitled as stated below. Each volume will be submitted as a separate file. Multiple electronic files may be submitted for each volume; however, the total number of individual files should not exceed 10 files.

<u>PROPOSAL VOLUME -- TITLE</u>	<u>PAGE LIMITATION</u>
Volume I -- Offer and Other Documents	None
Volume II -- Technical Proposal	40
Volume III -- Cost Proposal	None

**SIGNED ORIGINALS - IIPS (JULY 2001)**

All offerors are also required to send one (1) fully executed copy of original signed documents to the address on the solicitation cover page within five (5) working days of the proposal due date. No changes or variances from the electronically submitted version of the documents will be accepted.

## **L.22 PREPARATION INSTRUCTIONS: VOLUME I - OFFER AND OTHER DOCUMENTS (MAR 1999)**

Volume I, Offer and Other Documents, consists of the actual offer to enter into a contract to perform the desired work, other documents requiring the signature of the offeror's authorized representative, and the offeror's description of its business and management approaches to satisfying the Statement of Work and its capability to perform the work. Submission of electronic proposals via IIPS will constitute submission of signed copies of the required documents.

### **FORMAT AND CONTENT**

Volume I, Offer and Other Documents, shall include the following documents (in the order listed):

(a) The SF33 Form -- Solicitation, Offer and Award (Page 1 of this solicitation)

- (1) Offerors shall complete Blocks 12, 15A, 15B, 15C, 16, and sign in block 17. The SF33 is to be fully executed, including the acknowledgment of amendments, if applicable, and signed by an authorized individual of the proposing organization.
- (2) The offeror's Acceptance Period (See Block 12) entered shall not be less than 180 days.
- (3) Signature Authority. The person signing the SF33 must have the authority to commit the offeror to all of the provisions of the proposal, fully recognizing that the Government has the right, by terms of the solicitation, to make an award without further discussion if it so elects.

(b) Offeror Representations and Certifications Fully Executed

Offeror Representations and Certifications included under Section K of this solicitation are to be fully executed and a copy included in each copy of Volume I, Offer and Other Documents. As stated in Section K, should an offeror be selected for further negotiations, he must certify to the certifications referenced.

(c) Supporting Data

The supporting data to be included in Volume I shall include all of the following information:

- (1) The suitability of proposed teaming agreements among participants (including subcontractors).
- (2) A discussion of the proposed involvement of qualified and capable small and small socially and economically disadvantaged business concerns. This section shall also contain the offerors commitment to, on request, submit and negotiate in good faith a Small and Small Disadvantaged Business Subcontracting Plan in accordance with FAR 52.219-9 of this solicitation.

(d) Exceptions and Deviations

The offeror shall identify and explain any exceptions or deviations taken or conditional assumptions made with respect to the model contract, Offeror Representations and Certifications, and the requirements included in Volume I -- Offer and Other Documents, Volume II -- Technical Proposal and Volume III -- Cost Proposal. Any exceptions taken must contain sufficient justification to permit evaluation. The benefit to the Government shall be explained for each exception taken. Such exceptions will not, of themselves, automatically cause a proposal to be termed unacceptable. A large number of exceptions, or one or more significant exceptions not providing benefit to the Government, however, may result in rejection of your proposal(s) as unacceptable. Offerors who object to review of their proposal by persons other than Government employees shall so state in this Volume I. Again, offerors are cautioned that DOE may be unable to give full consideration to proposals which indicate that only Government evaluation is authorized.



**L.23 ENVIRONMENTAL, HEALTH, SAFETY AND SOCIETY IMPACT (MAR 1999)**

Should the Offeror be selected for further negotiations leading to contract award, the Offeror will be required to submit a completed Environmental Assessment Questionnaire (see Section J, Attachment E). This will be a detailed, self-contained document summarizing the proposed action, its alternatives, the existing environment, anticipated impacts from the project, and any regulatory compliance necessary. DOE shall use this questionnaire to evaluate the potential impacts of the proposed project, and at the earliest possible time, whether execution of the proposed activities will require an Environmental Assessment (EA), an Environmental Impact Statement (EIS), or can be covered under a Categorical Exclusion (CX). If the environmental impacts are considered significant, the selectee, prior to award, will be required to prepare the Environmental Compliance Plan, an Environmental Monitoring Plan, and Environmental Report. Contract award will be made after the environmental material submitted by the respective contractor has been reviewed and accepted by DOE.

**L.24 52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER. (JUN 1999)**

(a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" followed by the DUNS number that identifies the offeror's name and address exactly as stated in the offer.

The DUNS number is a nine-digit number assigned by Dun and Bradstreet Information Services.

(b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one. A DUNS number will be provided immediately by telephone at no charge to the offeror. For information on obtaining a DUNS number, the offeror, if located within the United States, should call Dun and Bradstreet at 1-800-333-0505. The offeror should be prepared to provide the following information:

- (1) Company name.
- (2) Company address.
- (3) Company telephone number.
- (4) Line of business.
- (5) Chief executive officer/key manager.
- (6) Date the company was started.
- (7) Number of people employed by the company.
- (8) Company affiliation.

(c) Offerors located outside the United States may obtain the location and phone number of the local Dun and Bradstreet Information Services office from the Internet home page at <http://www.customerservice@dnb.com>. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at [globalinfo@mail.dnb.com](mailto:globalinfo@mail.dnb.com).

**L.25 PREPARATION INSTRUCTIONS: VOLUME II - TECHNICAL PROPOSAL (OCT 2000)**

Volume II - Technical Proposal will be used to assess both the scientific merit of the proposed work and its relevance to both DOE's current programmatic objectives and the objectives of this solicitation (see Part I, Section J, Attachment A). The technical proposal must be self-contained and written in a clear and concise manner. The proposal shall be definitive with respect to the research which the offeror actually proposes to conduct. If the proposal is selected for comprehensive evaluation, the criteria specified in Section M shall be applied.

The maximum number of pages for the Technical Proposal shall be limited to **40** pages. For interpretation of page guidelines, reference the clause entitled, "Proposal Preparation Instructions -- General". Note that the Cover Sheet, Resumes, Public Abstract, Table of Contents and other Pertinent Publications are not included in the page limitation. **The Public Abstract is to be submitted as a separate file, specifically labeled "Abstract.pdf" or "Abstract.doc," depending on the chosen file**

**format. Separate files may be submitted, however, offerors are cautioned that the total number of files for the Technical Proposal should be limited to 3 files.**

To ensure that the technical proposal is evaluated strictly on its own merit, no cost information shall be included.

## FORMAT AND CONTENT

The offeror shall include a technical discussion in the format specified below. This format relates to the technical evaluation criteria found in Section M. Alternate heading names and additional headings may be included as desired.

1. Cover Sheet .

A completed and signed cover sheet as per FAR 52.215-1 shall be used. The title of the proposed effort should be concise and descriptive of the work to be performed.

2. Public Abstract

A concise public abstract of no more than one (1) typewritten page clearly stating the objectives of the proposed research, the title of the project, methodology, and sponsoring organization(s) shall be included. The abstract is to provide an overview of the proposed project objectives. It is a stand-alone document. This abstract may be released to the public by DOE in whole or in part at anytime. It is therefore required that it shall not contain proprietary data or confidential business information. The offeror shall indicate a point of contact for coordination, preparation and distribution of press releases. **The Public Abstract must be submitted as a separate file, clearly labeled “Abstract.pdf or Abstract.doc,” depending on file format.**

3. Table of Contents

In order to produce a comprehensive application for this solicitation, the offeror should address, at a minimum, the areas listed below. To help facilitate the review process and to insure addressing all the review criteria, the offeror shall use the following Table of Contents when preparing the technical application.

### TABLE OF CONTENTS

#### TABLE OF CONTENTS

#### LIST OF TABLES

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#### TECHNICAL DISCUSSION

Understanding and Technical Approach

Merit of Technology

Personnel Qualifications, Project Organization, and Experience

Facilities and Equipment

#### TECHNICAL EXCEPTIONS AND DEVIATIONS

#### APPENDICES

A. Statement of Work

B. Resumes

C. Additional Pertinent Publications/Past Performance Reviews/Letters of Recommendation (if any)

Page

## TECHNICAL DISCUSSION

This section shall contain the major portion of the Technical Proposal. It shall clearly address each of the Technical Proposal evaluation criteria in Part IV -- Section M, and at a minimum cover the factors listed below.

**Note:** It is critical that the offeror’s Technical Discussion clearly address each ‘element’ cited herein; these elements are structured to correlate one-to-one with the weighted evaluation criterion given in Section M of this

*solicitation. Failure to comprehensively address any element can adversely impact the favorable evaluation of your technical proposal.*

## **Element 1. Understanding and Technical Approach**

This section shall describe both the offeror's understanding of the problem/need, and also the offeror's technical approach to accomplish the work.

The offeror shall provide a discussion that illustrates an understanding of the problem/need. This discussion may include, but is not necessarily limited to, a discussion/overview of technical issues and history of the need/problem in the DOE Complex for the selected topic areas, applicable sites, baseline technologies, alternative technologies, and issues/acceptance requirements (e.g. Environmental, Health, and Safety, others) for technology end-users, regulators, and stakeholders. The offeror shall also provide a discussion which clearly reflects an understanding of the technical problems and issues, as well as the conditions at sites with soil and groundwater contaminated with volatile organic compounds (for Topic 1) or metal and radionuclides (for Topic 2).

The offeror shall address the technical approach to accomplish the work by providing a discussion that includes, but is not necessarily limited to, a description of the proposed technology and the scientific/engineering basis, its intended uses(s), the need(s)/problems(s) the technology addresses and breadth of applications in the DOE Complex, history of previously related work, and novel/innovative nature. The current maturity of the technology should also be discussed, and supportive evidence provided that maturity is at level that full scale demonstration field tests could be completed within approximately two calendar years after contract award. These discussions should include, but are not limited to, discussions of technical feasibility and ability to meet end-user performance requirements and schedule. These discussions should be supported with summaries and data results of proof-of-principle tests, laboratory-scale experimentation, and/or other testing. Clear and direct scale-up capabilities should be provided.

In the technical approach, the offeror shall provide a clear description of the project objectives(s) and deliverables (e.g., reports, prototype equipment). The offeror shall provide a definitive Statement of Work (SOW) which shall be divided into logical tasks and subtasks necessary to accomplish the project objectives(s). Technical approach must provide a clear and logical path for the project. The offeror should also address performance requirements and measures provided in Enclosure 1 - General Background and Description of Representative DOE Sites. The Statement of Work should be structured into Phase 1 and Phase 2. It is critical that the proposed Statement of Work include both Phase I and Phase II tasks; proposals not addressing both Phase 1 and 2 tasks will be considered incomplete. Phase 1 should include any required design, fabrication, control/field testing, and supporting activities, and Phase 2 should include full scale field demonstration tests and supporting activities. Possible failure scenarios should be fully addressed, and alternative plans should be identified. A project review and contract decision point for continuance of the contract into Optional Phase 2 (contract go/no go decision point), shall be included as a milestone placed between Phase 1 and Phase 2. The key go/no go decision point will be used to evaluate project success. The offeror shall also identify any specific success criteria that must be satisfied to demonstrate success for this key go/no-go decision point; the identified performance requirements and measures provided in Enclosure 1 should also be considered for this decision point.

The offeror shall propose a schedule which clearly delineates critical milestones. The offeror shall provide a PERT (Program Evaluation and Review Techniques) chart or equivalent depicting the project schedule, milestones, and interrelationships of the project tasks. The offeror shall identify the critical path which identifies the sequential tasks which, if not completed on time, will result in a delay in the overall project schedule. A realistic time frame for accomplishment of 'Key Milestones' should be clearly established. If the work cannot be performed in accordance with the Government's desired schedule, the proposal should state and indicate the reasons why. Conversely, if the schedule can be realistically shortened, it may be advantageous to elaborate on this contention.

The offeror shall provide a table listing the estimated labor hours and labor categories (e.g. management, engineering, scientific, technician, analytical, clerical) required for each task. The offeror shall include a table showing labor hours and labor categories for any proposed subcontracting or consulting effort for each task. The offeror shall discuss the rationale used to develop estimates for labor hours, labor categories, subcontracting effort, resulting effort, and travel. Cost information is not to be included in the technical proposal volume.

The offeror shall describe the proposed travel. The purpose of the trip, number of trips, the origin and destination, trip duration, and the number of personnel shall be included in the explanation. Again, no cost information is to be included in this Technical Volume.

## **Element 2. Merit of the Technology**

The offeror shall describe the merits of the proposed technology in terms of anticipated performance and/or cost savings over existing technologies and how the technology is an improvement over baseline technologies. Major impacts for future potential use of the technology should be clearly stated and supported by evidence provided. Information should be provided which supports the merits claimed for the proposed technology. Offeror's should address the proposed technology's ability to:

- Meet end-user requirements, address end-user issues, and obtain end-user acceptance and commitment on factors that include technology effectiveness, implementation, meeting required schedule, improvements over baselines, and others. End-user performance requirements should be incorporated into the project and implementation issues defined. Evidence should be provided that end-user requirements and acceptance will likely be met.
- Reduce/minimize waste and contamination (generated or secondary wastes).
- Reduce risks for and protection of the public, the worker, and the environment.
- Show a cost savings, especially compared to baseline technologies. Detailed information should be provided to support cost reduction statements.
- Meet regulatory compliance, address regulatory issues, and obtain regulatory acceptance. Evidence should be provided that regulatory compliance and acceptance will likely be met.
- Address stakeholders issues and obtain stakeholders acceptance.
- Improve clean-up and waste management/processing operations.
- Reduce the time required for remediation and/or waste management/processing.
- Reduce environmental impacts.
- Be broadly applicable (prevalence of need, and application of technology in addressing need).
- Be implemented. Research must yield results within a time frame consistent with implementation/ deployment needs.

## **Element 3. Personnel Qualifications, Project Organization, and Experience**

The offeror shall describe relevant technical and managerial experience, qualifications, training, and availability of the proposed project personnel including subcontractors and consultants. The offeror shall provide the names of management and key personnel, including subcontractor and consultants, to be assigned for direct work on the project and their time commitments. Resumes of key project personnel (e.g. project manager; principal investigator; key environmental, safety, and health personnel) shall be included in an appendix to the proposal. Educational background, accomplishments, and other pertinent information shall be provided concerning specified personnel.

The offeror shall discuss any prior experience in managing projects that were similar in type, size, and complexity. The offeror shall especially note experience working in similar field conditions, including experience working with groundwater contaminated with volatile organic compounds (Topic 1) or soil and groundwater contaminated with metals and radionuclides (Topic 2), and experience in working with radiologically contaminated waste sites and material. **Training that personnel have completed to work in such contaminated conditions shall be clearly stated.**

The offeror shall provide a description of the project organization structure and the lines of authority, both technical and administrative, and the relationship to the proposed research effort.

The offeror must also provide a detailed organization chart for the entire project team delegated to carry out the Statement of Work and an accompanying narrative indicating the interactions of all key project personnel.

Role and responsibilities of key personnel shall be clearly defined. A Manning Table shall be included, which indicates the time commitments for ALL key personnel assigned to this project. It is not sufficient to merely indicate a certain number of hours; a determination as to why that number of hours required shall be included. In addition, the hours shall be related to the specific tasks to be performed and, as far as possible, shall indicate the job disciplines and classifications (engineering, manufacturing, scientific) under each task (*No cost information shall be included in this "manning table"*).

The offeror shall discuss project management controls. The offeror needs to discuss its internal approach for evaluating project performance and prepare a list of performance goals that will be used by the project manager to determine the progress of team members towards meaningful conclusion of the project within time and budget constraints.

The relevance of prior corporate/institutional experience related to this specific PRDA requirement shall be discussed. The offeror must provide comprehensive discussion of how the project will be managed to accomplish its objectives and ensure its success. This discussion must explain the offeror's approach for directing and coordinating human, material, and financial resources throughout the project life cycle, individual team member activities, cost management and controls, QA/QC, environmental, safety, and health procedures, project reviews, compliance with reporting requirements, and other management elements. The offeror shall state the control tools it will use to maintain established cost, technical, and schedule baselines and how the offeror proposes to manage future baseline changes (unanticipated changes to work scope, cost plans, and schedule).

#### **Element 4. Facilities and Equipment**

The offeror shall provide a discussion of the type, quality, availability, and appropriateness of the proposed facilities and equipment, including a description of any facilities and/or nonmonetary resources requested to be furnished by the Government for use by the offeror in performance of the proposed research.

The offeror shall furnish a list (i.e., type and quantities) of materials, parts, equipment, and test facilities required for the project. The offeror shall provide a detailed description of the existing and proposed facilities, and arrangements to provide such facilities, including a discussion of the availability and suitability of the equipment, instrumentation, and analytical and data acquisition systems to be utilized. The offeror shall also discuss facility modifications, equipment purchases, and other arrangements required to effectively perform the Statement of Work.

This listing shall also be related to the Statement of Work tasks and the schedule. A clear and direct relationship/link between required equipment and the tasks and schedule, should be provided to document which equipment, materials, and facilities will be required to perform specified tasks. Equipment shall be identified as Contractor Owned and Government Property – Contractor Acquired.

### **L.26 INSTRUCTIONS FOR PREPARING THE STATEMENT OF WORK (NOV 2000)**

The Department of Energy's National Energy Technology Laboratory uses a specific format for Statements of Work in its contracts. In solicitations such as this Program Research Development Announcement (PRDA), where the Government does not provide a Statement of Work, the Offeror is to provide one, which the Department of Energy will then use to generate the Statement of Work to be included in the contract. The following format includes Scope of Work, Tasks to Be Performed, Deliverables, and Briefings. Several specific tasks have also been provided in the following for the offeror to insert into the Statement of Work at the appropriate location.

All proposals must contain a single, detailed Statement of Work that addresses how the project objectives will be met. The Statement of Work must contain a clear, concise description of all activities to be completed during project performance and

follow the structure discussed below. This Statement of Work may be released to the public by DOE in whole or in part at any time. It is therefore required that it shall not contain proprietary data or confidential business information.

The Statement of Work is generally less than 10 pages in total for proposed work, and shall be included in Appendix A of the Volume II, Technical Proposal. Offerors shall prepare the Statement of Work in the following format:

**TITLE OF WORK TO BE PERFORMED (Do Not Use Solicitation Title)**

Insert title of work to be performed. Be concise and descriptive  
(e.g., "Improved Delivery of *InSitu* Treatment for Groundwater Plumes with the XYZ™ System").

**A. SCOPE OF WORK**

This section should not exceed one page and should define the overall effort that will take place and the methodology to achieve the objectives of the proposed research and development effort.

**B. TASKS TO BE PERFORMED**

Tasks, concisely written, should be provided in a logical sequence and should be divided into the phases of the project. This section provides a brief summary of the planned approach to this project.”

- Base Contract - Phase I - provide a short title (e.g., System Design, Fabrication, and Testing)  
  
Until the National Environmental Policy Act review and approval process is completed and notification is provided, the Contractor shall take no action that would have an adverse impact on the environment or limit the choice of reasonable alternatives to the proposed action.

Task 1.1 -short title

(The Offeror shall provide a description of the work performed and not the detail approach.)

Task 1.2 -short title

Task 1.3 -short title

Task 1.4 -short title

Task 1.n -short title

In addition to the above Phase I instructions, the following Phase I tasks shall be inserted by the offeror in the appropriate location in the Statement of Work.

**BASE CONTRACT - PHASE I**

**Task 1.n--Coordination and Planning**

This task shall consist of necessary activities to ensure coordination and planning of the project with DOE/NETL, representatives from other DOE sites and the DOE Environmental Management (EM) technology development program. These shall include but are not limited to the following: Project Kick-off Meeting; submission of required NEPA documentation; preparation and submission of documents (e.g., Workplans, Sampling and Analysis Plans, Environmental, Safety, and Health Plans) for site and regulator approval. All tasks must be planned and executed according to DOE Orders, codes and standards, and procedures in place at the host site. Coordination with DOE contractor personnel will also be required.

The Contractor shall define a list of technical success criteria and measures that shall be used upon completion of Phase 1, for review of Phase 1 results, downselection, and continuance of the project into Phase 2. The list shall be submitted to DOE for review and approval.

### Task 1.n--Controlled Field-Scale Test Workplan

The Contractor shall develop and submit to DOE for review, a detailed Workplan for the controlled, field-scale testing of the technology system provided by the Contractor to deliver and distribute treatment to targeted subsurface conditions. The site shall be selected jointly by DOE and the Contractor. The objective will be to test under controlled subsurface conditions, the technology system in conditions comparable to those difficult conditions identified at DOE sites. DOE will provide to the Contractor, guidance relative to specific treatment that must be delivered, as well as specific subsurface conditions of interest. The Workplan shall detail the technical and operational elements of this testing. Typical components of a Workplan include, but are not limited to, the following: technology description; field test objectives; experimental design and procedures; sample preparation, equipment, and materials; sampling and analyses plan; data management; data analysis and interpretation; Environmental, Safety, and Health (ES&H) plan; waste management and decontamination plans; and supplementary material (provides more detailed information for sampling plan, quality assurance project plan, ES&H plan, waste management plan, and standard operating procedures). The draft Workplan shall be submitted to the DOE/COR for review and approval. Any revisions shall be made, and the Workplan resubmitted for approval.

### Task 1.n--Controlled Field-Scale Testing

The Contractor shall complete the necessary activities to conduct control testing of the technology system at a site selected jointly by DOE and the Contractor. Testing shall be conducted in accordance with the approved Workplan. The testing shall include operation of the technology system and an independent methodology to validate operation. Testing interval shall be the length of time specified in the approved Workplan. Initial test results shall be evaluated, and minor modifications or refinements to the delivery system may be completed to enhance operation of the technology system, and retesting may be completed. The Contractor shall coordinate with the DOE to determine the degree and length of any retesting.

### Task 1.n-- Reporting

The Contractor shall prepare and present a briefing of Phase I results, and planned project work for Optional - Phase II, at a site selected jointly by DOE and the contractor. This presentation shall take place not less than 45 days before the expiration of the Phase I contract. The contractor shall prepare for review and comments, a draft Topical Report on the Phase I contract activities. This report shall follow the guidelines set forth in the contract and shall include, but not be limited to: delivery system design; Workplans; description of and results from Phase I testing; and cost benefits of technology compared to baselines and alternative technologies. After review and comment by the DOE, the Contractor shall revise the report and submit to DOE. Attendance and presentation at the Annual Industry Programs Conference and the Subsurface Contaminant Focus Area Annual Midyear Review shall also be completed.

The following statement should be inserted between Phase I and Phase II.

**NOTE: At this time the DOE will evaluate the merits of the project to determine if the optional Phase II shall be conducted. The contractor shall not proceed with these Phase II tasks unless the Contracting Officer issues a modification to the contract authorizing the contractor to proceed with Phase II in accordance with provision B.4. If the determination is made not to continue with the Phase II tasks, the topical report submitted under Phase I shall be considered the final report.**

## **OPTIONAL PHASE II**

### Task 2.n--Coordination/Planning and Site Selection/Assessment in Preparation for Full Scale Demonstration

This task shall proceed only after the review of the Phase I contract results by DOE and DOE-selected representatives, and the approval to proceed from the DOE/NETL Contracting Officer. This task shall include activities necessary to ensure coordination and planning of the full scale demonstration at a site selected jointly by DOE and the Contractor. These shall include but are not limited to the following: Project Kick-off Meeting; submission of required NEPA documentation; preparation and submission of documents (e.g., Workplans, Sampling and Analysis Plans, Environmental, Safety, and Health Plans) for site and regulator approval. All tasks must be planned and executed according to DOE Orders, codes and standards, and procedures in place at the host site. Coordination with DOE contractor personnel will also be required.

A base map of appropriate scale of the site selected for the full scale demonstration shall be provided to DOE.

### Task 2.n--Full Scale Demonstration Workplan

The Contractor shall develop and submit to DOE for review, a detailed Workplan for the full scale demonstration of the technology delivery system. The Workplan shall detail the technical and operational elements of this testing. The Workplan shall be written in the context of the selected test site and shall contain all components required by the host site. The Workplan must be approved prior to site mobilization to the field test site. Typical components of a Workplan include, but are not limited to, the following: technology description; field test objectives; experimental design and procedures; site preparation, equipment, and materials; sampling and analyses plan; data management; data analysis and interpretation; Environmental, Safety, and Health (ES&H) plan; waste management and decontamination plans; public participation; reporting; schedules; regulatory compliance; project organization; and supplementary material (provides more detailed information for field sampling plan, quality assurance project plan, ES&H plan, waste management plan, public participation plan, readiness review plan, regulatory compliance plan, and standard operating procedures). The Workplan shall also include a plan for the verification of the field test results using independent field sampling data (e.g., groundwater samples collected from monitoring wells installed for this purpose), control tests, or other acceptable means. The Workplan shall be submitted to DOE for review and approval. Any modifications must be made, and the Workplan must be resubmitted and accepted for approval.

### Task 2.n--Full Scale Demonstration

Contractor shall conduct a full scale demonstration at a site selected jointly by DOE and the Contractor. Task shall include activities necessary to complete verification of these field test results using independent field sampling, control tests, or other acceptable means. Task also includes support activities necessary to complete field testing that shall include, but are not limited to the following: site mobilization/demobilization; site preparation; facilities/utilities requirements; waste management and decontamination; and site restoration. The Workplan must be approved by DOE prior to conducting these activities. The Contractor shall coordinate fully with the demonstration site to perform these activities as planned in the approved Workplan.

Upon conducting the full scale demonstration, and not later than 48 hours from the start of the testing, initial test results from the data acquisition shall be provided in a “Quick Look” report that shall be in a format that is specified in the approved Workplan. Upon completion of testing, results shall be evaluated with respect to meeting performance goals and providing cost benefits superior to current baseline technologies.

### Task 2.n-- Reporting

The Contractor shall prepare and present a briefing of Phase II results at DOE/NETL or another site selected by DOE. This presentation shall take place not less than 45 days before the expiration of the Phase II contract. The Contractor shall prepare for review and comments, a draft Final Report on the Phase I and Phase II contract activities. This report shall follow the guidelines set forth in the contract and shall include, but not be limited to: delivery system design; Workplans; description of and results from Phase I and Phase II testing; and cost benefits of technology compared to baselines and alternative technologies. After review and comment by the DOE, the Contractor shall revise the report and submit to DOE. Attendance and presentation at the Annual Industry Programs Conference and the Subsurface Contaminant Focus Area Annual Midyear Review shall also be completed.

### **Deliverables**

The Topical and Final reports shall be submitted in accordance with the “Reporting Requirements Checklist” and the instructions accompanying the checklist that will be provided in the solicitation. In addition, the Contractor shall submit the following:

1. Documentation for coordinating and planning as described in Phase I tasks.
2. Workplan for Phase I controlled field scale testing as described in Phase I tasks.
3. Topical Report, as described in Phase I tasks.
4. Documentation for coordinating and planning, as described Phase II tasks.
5. Base maps of full scale demonstration site as described in Phase II tasks.
6. Workplan for Phase II full scale demonstration as described in Phase II tasks.
7. Quick-Look Report and other data results, as described in Phase II tasks.
8. Final Report, as described in Phase II tasks.



### **Briefings/Technical Presentations**

1. Kickoff briefing with DOE/NETL and other DOE-selected representatives at site selected jointly by DOE and the Contractor.
2. Briefings at site selected by DOE upon completion of : (1)Phase I; and (2) Phase II.
3. Annual presentations at NETL Annual Industry Programs Contractor Review Meeting.
4. Annual presentations at the Subsurface Contamination Focus Area Midyear Review Meeting.

### **L.27 PROPOSAL PREPARATION INSTRUCTIONS - VOLUME III COST PROPOSAL (NOV 2000)**

Proposal Preparation Instructions - Volume III, Cost Proposal (NOV 2000)

The Volume III, Cost Proposal shall consist of the offeror's estimated costs to perform the desired work as set forth in the SOW. Since the Cost Proposal shall be 1) evaluated to determine cost realism and the offeror's understanding of the magnitude of effort and 2) used as the basis for any necessary cost negotiation, the Cost Proposal shall be accurate, complete, and well documented

As prescribed by FAR 52.215-20 with Alternate 1, the offeror shall submit cost or pricing data and supporting attachments in accordance with the Cost Proposal Preparation Instructions/Format provided on the NETL Website located at:

[http://www.netl.doe.gov/business/forms/cost\\_rfp.html](http://www.netl.doe.gov/business/forms/cost_rfp.html)

### **L.31 952.227-84 NOTICE OF RIGHT TO REQUEST PATENT WAIVER. (FEB 1998)**

Offerors have the right to request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of the contract that may be awarded as a result of this solicitation, in advance of or within 30 days after the effective date of contracting. Even where such advance waiver is not requested or the request is denied, the contractor will have a continuing right under the contract to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the contract. Domestic small businesses and domestic nonprofit organizations normally will receive the patent rights clause at DEAR 952.227-11 which permits the contractor to retain title to such inventions, except under contracts for management or operation of a Government-owned research and development facility or under contracts involving exceptional circumstances or intelligence activities. Therefore, small businesses and nonprofit organizations normally need not request a waiver. See the patent rights clause in the draft contract in this solicitation. See DOE's patent waiver regulations at 10 CFR part 784.

### **L.32 INFORMATION OF AWARD (NOV 1997)**

Written notice to unsuccessful offerors and contract award information will be promptly released in accordance with DOE regulations applicable to negotiated acquisitions.

### **L.33 DISPOSITION OF SOLICITATION MATERIALS AND PROPOSALS (FEB 1998)**

Drawings, specifications, and other documents supplied with the solicitation may be retained by the offeror (unless there is a requirement for a document to be completed and returned as a part of the offer).

Offeror's Proposals will not be returned (except for timely withdrawals).

### **L.34 52.233-2 SERVICE OF PROTEST. (AUG 1996)**

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from:

Raymond D. Johnson  
U. S. Department of Energy  
National Energy Technology Laboratory  
P.O. Box 10940  
626 Cochrans Mill Road  
Pittsburgh, PA 15236-0940

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

**L.35 952.233-2 SERVICE OF PROTEST. (APR 1995)**

(c) Another copy of a protest filed with the General Accounting Office shall be furnished to the following address within the time periods described in paragraph (b) of this clause: U.S. Department of Energy, Assistant General Counsel for Procurement and Financial Assistance (GC-61), 1000 Independence Avenue, S.W., Washington, DC 20585 Fax: (202) 586-4546.

**L.36 952.233-4 NOTICE OF PROTEST FILE AVAILABILITY. (SEP 1996)**

(a) If a protest of this procurement is filed with the General Accounting Office (GAO) in accordance with 4 CFR Part 21, any actual or prospective offeror may request the Department of Energy to provide it with reasonable access to the protest file pursuant to FAR 33.104(a)(3)(ii), implementing section 1065 of Public Law 103-355. Such request must be in writing and addressed to the contracting officer for this procurement.

(b) Any offeror who submits information or documents to the Department for the purpose of competing in this procurement is hereby notified that information or documents it submits may be included in the protest file that will be available to actual or prospective offerors in accordance with the requirements of FAR 33.104(a)(3)(ii). The Department will be required to make such documents available unless they are exempt from disclosure pursuant to the Freedom of Information Act. Therefore, offerors should mark any documents as to which they would assert that an exemption applies. (See 10 CFR part 1004.)

**L.37 952.233-5 AGENCY PROTEST REVIEW. (SEP 1996)**

Protests to the Agency will be decided either at the level of the Head of the Contracting Activity or at the Headquarters level. The Department of Energy's agency protest procedures, set forth in 933.103, elaborate on these options and on the availability of a suspension of a procurement that is protested to the agency. The Department encourages potential protesters to discuss their concerns with the contracting officer prior to filing a protest.

## **SECTION M - EVALUATION FACTORS FOR AWARD**

### **M.1 GENERAL (MAR 1998)**

Proposals will be evaluated in accordance with applicable DOE acquisition policies and procedures. Evaluation will be performed to determine the offeror's understanding of work to be performed, technical approach, potential for completing the work as specified in the solicitation, cost reasonableness, the probable cost to the Government, and ranking with competing offerors.

Award will be made to that responsible offeror(s), whose offer(s), conforming to this solicitation, is (are) considered most advantageous to the Government, considering the Evaluation Criteria in this Section M.

### **M.2 OVERALL RELATIVE IMPORTANCE OF EVALUATION CRITERIA (PRDA) (FEB 2001)**

The Technical Proposal is of greater importance than the Cost Proposal. The Offer and Other Documents Proposal is to be evaluated for adequacy and compliance with the solicitation.

### **M.3 EVALUATION (PRDA) (FEB 2001)**

Evaluation and selection of proposals will consist of a preliminary review, a comprehensive evaluation with final ranking, and application of program policy factors.

### **M.4 PRELIMINARY REVIEW (PRDA) (FEB 2001)**

Proposals will receive a preliminary review to determine that the proposal contains sufficient technical, cost, and other required information to enable comprehensive evaluation and has been signed by a responsible official of the proposing organization or person authorized to obligate such organization.

If the proposal does not meet these requirements, a comprehensive evaluation shall not be made. In such case, a prompt notice shall be sent to the offeror indicating the reason(s) for its not being selected for a comprehensive evaluation.

### **M.5 COMPREHENSIVE EVALUATION (PRDA) (FEB 2001)**

The basic task in the evaluation and selection of proposals for award or support is to assess the relative merit to determine which proposal(s) offers the greatest likelihood for achievement of the PRDA objectives. Technical quality, ability of the proposer, estimated cost, and other relevant factors are considered.

Proposals passing the preliminary review will receive a comprehensive evaluation in accordance with the evaluation criteria below.

### **M.6 TECHNICAL EVALUATION CRITERIA (PRDA) (FEB 2001)**

The following criteria will be considered in the evaluation of the technical merit of proposals submitted in response to this PRDA. The technical evaluation criteria are listed in descending order of importance. The relative weights of each criterion are indicated beside each criterion.

#### ***Criterion 1. Understanding and Technical Approach.....(35%)***

- Degree to which offeror demonstrates an understanding of the Department of Energy (DOE) Environmental Management need(s)/problem(s) being addressed.
- Extent of evidence presented that demonstrates an understanding of baseline and alternative technologies used for problem(s) being addressed.
- Demonstrated understanding of issues/acceptance requirements of technology end-users, regulators, and stakeholders.

- Soundness of scientific and engineering rationale; likelihood that proposed technology will meet the DOE need(s); breadth of application; and novel/innovative nature.
- Reasonableness of technical feasibility, maturity level, and degree to which ability to implement is supported with previous testing and other data.
- Reasonableness and completeness of proposed Statement of Work, path for completing the project, and identification of failure scenarios and contingency plans as relates to the proposed project path.
- Reasonableness and likelihood of project approach to meet defined, end-user performance requirements and measures.
- Reasonableness of proposed key milestones and project schedule to incorporate end-user requirements and provide results within a time frame consistent with implementation and deployment needs.
- Reasonableness of proposed labor and travel.

***Criterion 2. Merit of the Technology.....(35%)***

- Demonstrated ability of technology to meet and address issues/requirements/acceptance of technology end-users including technology effectiveness, implementability, meeting required schedules, and improvements and anticipated cost savings over baseline technologies.
- Demonstrated ability to reduce/minimize waste and contamination; and to reduce risk for and protect the public, the worker, and the environment.
- Demonstrated ability of the technology to meet and address issues/requirements/acceptance of technology regulators and stakeholders; improve clean-up operations; reduce remediation schedules; reduce environmental impacts; have broad and widespread application to a prevalent need(s) in the DOE Complex; and be implemented.
- Ability to meet end-user requirements, and obtain end-user acceptance and commitment.

***Criterion 3. Personnel Qualifications, Project Organization and Experience.....(20%)***

- Extent and evidence of the offeror's technical and managerial experience, qualifications, and training; availability of personnel; and existence of licenses necessary to work at sites with groundwater and soil contaminated with volatile organic compounds (Topic 1) or metals and radionuclides (Topic 2).
- Clarity and appropriateness of project organization, management structure, roles and responsibilities of key personnel, project management controls and performance goals.
- Evidence of prior experience in managing projects (including subcontracts) similar in type, technology, size, and complexity.

***Criterion 4. Facilities and Equipment.....(10%)***

- Quality, availability, and appropriateness of the offeror's proposed facilities and equipment.
- Appropriateness of relationships/links between proposed facilities and equipment needs, and project tasks and project schedule.

**M.7 COST CRITERIA (PRDA) (FEB 2001)**

The cost proposal will not be point scored, assigned a numerical weight, or adjectivally rated. The costs proposed will be evaluated in accordance with the following criteria, which are of equal importance:

1. Reasonableness and appropriateness of cost,

2. Evaluated probable cost to the Government,
3. Extent of cost participation, if applicable.

#### **M.8 APPLICATION OF PROGRAM POLICY FACTORS (FEB 2001)**

Program Policy Factors, while not indicators of the proposal's merit, e.g., technical excellence, cost, proposer's ability, etc., may be essential to the process of selecting the proposal(s) that, individually or collectively, will best achieve the program objectives. Such factors are often beyond the control of the offeror. Proposers should recognize that some very good proposals may not receive an award because they do not fit within a mix of projects which maximizes the probability of achieving the DOE's overall research and development objectives. Therefore, the following Program Policy Factors may be used by the Source Selection Authority (SSA) to determine the optimal mix of ranked proposal(s) to receive DOE funding support.

1. It may be desirable to select project(s) for award that represent a diversity of technologies, methods, or approaches.
2. It may be desirable to select project(s) for award which minimize issues regarding environmental permitting and the impact of regulatory issues.
3. It may be desirable to select project(s) for award which initiate work at a higher level of technology maturity and exhibit higher potential to expedite implementation.
4. It may be desirable to select project(s) for award of less technical merit than other project(s), if such selection will optimize use of available funds by allowing more projects to be supported while not being detrimental to the overall objectives of the program.
5. It may be desirable to select project(s) for award which may be applicable to multiple DOE sites.

These policy factors will provide the Source Selection Authority with the capability of developing, from the competitive procurement, a broad involvement of organizations and organizational ideas, which both enhance the overall technology research effort and upgrade the program content to meet the goals of the DOE.

#### **M.9 SELECTION (PRDA) (FEB 2001)**

The Source Selection Authority will select a mix of proposals for award from the findings established by the proposal evaluation panel, taking into account the relative technical, environmental, and business and management and cost rankings as well as applicable program policy factors to determine which proposal(s) will best satisfy the program objectives.